SECOND TO FOURTH CENTURY CE STRUCTURES FROM HAWARA’S VICUS: INTERIM REPORT ON FIELD E121 AT HUMAYMA

by

Ian Babbitt

A thesis submitted to the Department of Classics
In conformity with the requirements for
the degree of Master of Arts

Queen’s University
Kingston, Ontario, Canada
(August, 2009)

Copyright © Ian Babbitt, 2009
Abstract

After over 20 years of excavation at Humayma, ancient Hawara, in southern Jordan, an immense spectrum of occupation has become evident, particularly from the Nabataean period in the first century BCE to the early Islamic period in the eighth century CE. This study of Field E121 focuses on three structures uncovered in the Roman period vicus, the civilian settlement adjacent to the Roman fort: a built platform, a stone structure and an animal pen. These structures suggest occupation from the second to fourth century CE, north of the known vicus center and west of the Roman fort.

Prior to this study, E121 had not been published although excavation was conducted on it in 1995. As a result, this study is the presentation and interpretation of all material relating to the previous excavation as well as the recently conducted 2008 excavation season. This thesis is a discussion of the excavation, phasing and possible functions of each structure and of how they fit into the greater local vicus context. E121 was chosen for excavation after a 13 year hiatus because numismatic and ceramic evidence all pointed to a later construction in this northern sector of the vicus, which made it unique among the known vicus structures. The fourth century CE has been largely unrepresented in the vicus’ archaeological record making E121 important for gathering data concerning civilian and military interactions during the Early Byzantine period.

Excavations at E121, despite heavy deterioration, reuse and robbing of its structures, have produced a wide array of cultural material relating to fourth century CE as well as the earlier vicus occupation. This evidence partially fills in the gap of fourth century CE occupation at the site and has provided new direction for future fourth century CE vicus excavation efforts. More specifically, E121 produced evidence for Roman construction in the vicus through the platform, stone architecture through the adjacent structure and a possible first indication of site orientation related to the Nabataean period.
Acknowledgements

I would like to express my dearest gratitude to the Classics Department of Queen’s University, which has helped me cultivate my love for Classical Studies through my undergraduate and graduate degree. In this regard, every professor in the department has helped as a friend or a teacher. Specifically, though, I would like to express my deepest appreciation to Dr. Foley, Dr. Falkner and the rest of the thesis committee for their comments and suggestions. Additionally, I would like to thank Dr. J.P. Oleson of Victoria University for giving me access to his own unpublished work as well as several other pieces of unpublished Humayma material. Most importantly, I would like to recognize and thank my advisor, mentor and academic guide, Dr. M.B. Reeves, for her willingness to take me on as her student and for offering me a chance to conduct new archaeological research. Thank you. Finally, for her enduring patience, impeccable organization and limitless motivational energy, I extend my sincerest love and thanks to my wife, Katherine Noelle Cummer.
Table of Contents

Abstract .................................................................................................................................................. ii
Acknowledgements ............................................................................................................................... iii
Table of Contents .................................................................................................................................. iv
List of Plates and Figures ....................................................................................................................... vi
Plates ....................................................................................................................................................... viii
Chapter 1 E121: Topography, Climate and an Introduction to Humayma .............................................. 1
  1.1 Humayma: Geography, Climate and E121 Topography ................................................................. 5
  1.2 E121: A Brief Introduction to the Area ......................................................................................... 8
  1.3 Concluding Thoughts and Considerations ..................................................................................... 9
Chapter 2 Introduction to Ancient Hawara: A Literature Review ....................................................... 11
  2.1 Scholarship at Hawara: Developing Interest and Research Goals ................................................ 11
  2.2 Hawara’s Historical Occupation: Archaeology and Literature .................................................... 18
      2.2.1 Mythological Foundation: Historic Perception of Hawara ...................................................... 19
      2.2.2 Nabataean Hawara: first century BCE to early second century CE ........................................ 22
      2.2.3 Roman Occupation and the vicus: early second to late fourth century CE ............................. 25
  2.3 Topical Literature: Architecture, Vici and Civic Relationships ................................................... 29
  2.4 Concluding Thoughts .................................................................................................................... 34
Chapter 3 The Excavation of E121: Fieldwork Review ....................................................................... 35
  3.1 Account of Excavation - 1995 ......................................................................................................... 35
  3.2 Account of Excavation - 2008 ......................................................................................................... 41
  3.3 Concluding Remarks ..................................................................................................................... 50
Chapter 4 Phase 1: Pre-Fourth Century CE Occupation .................................................................... 52
  4.1 The Platform in Phase 1: A Complete Physical Description .......................................................... 53
  4.2 Early Associates: Structure A in Phase 1 ...................................................................................... 57
  4.3 Dating the Platform to Phase 1: Size, Construction and Finds .................................................... 61
      4.3.1 Structure A in Phase 1 ............................................................................................................. 67
  4.4 Phase 1 and Platforms: Functions, Orientations and Cultural Context ....................................... 69
      4.4.1 Roman Military Functions: Tribunals, Altars and Statue Bases ............................................. 69
      4.4.2 Civic Functions: Orientations and the Nabataean Context .................................................... 74
  4.5 Discussion: The Platform and Cultural Context .......................................................................... 86
  4.6 Phase 1: Concluding Remarks ...................................................................................................... 92
Chapter 5 Phases 2 and 3: Fourth Century CE and Later Occupation .................................................. 95

5.1 Structure A in Phase 2: Rebuilding out of Line ........................................................................ 96
   5.1.1 Understanding Walls 03, 04 and 802 in Phase 2 ................................................................. 97
   5.1.2 Imagined Walls: The Wall Tumble of Structure A ............................................................ 103
   5.1.3 Hitting the Bottom: Beaten Earth Floors ......................................................................... 105

5.2 Date and Function: Small Finds and Contextual Evidence for Phase 2 .................................... 106
   5.2.1 The Ceramics of Structure A: Date and Collapse .............................................................. 106
   5.2.2 The Bronze Coins of Structure A: The End of Occupation ................................................ 110
   5.2.3 The Surface: Considering Hard Layers and the Natural Context ...................................... 111
   5.2.4 The Ash Deposit: Local Contributions to Phase 2 ............................................................ 114
   5.2.5 Conclusion: The Character of Phase 2 ............................................................................. 118

5.3 Structure B in Phase 3: Later Occupation of E121 ...................................................................... 121
   5.3.1 Structure B: The Walls ...................................................................................................... 122
   5.3.2 Ceramics and Small Finds: Structure B in context ............................................................ 128
   5.3.3 Structure B in the Regional Context: Date, Function and Collapse ................................. 130

5.4 Phase 2 and 3: Conclusions about Later Reuse and the End of Occupation ............................. 134

Chapter 6 Conclusions and Proposals for Future Excavation ....................................................... 137

6.1 E121: Contributions to Research of Ancient Hawara ............................................................. 137

6.2 E121: Future Excavation Goals ................................................................................................. 140
   6.2.1 The Platform .................................................................................................................. 141
   6.2.2 Structure A .................................................................................................................... 142
   6.2.3 The Surface and the Ash .............................................................................................. 143
   6.2.4 Structure B .................................................................................................................... 144

6.3 Concluding Thoughts ............................................................................................................... 144

Bibliography ................................................................................................................................. 146

Appendix A 2008 Registered Finds .............................................................................................. 155
List of Plates and Figures

Plate 1 : Humayma Site Plan (Skinner) .................................................................................................................. viii
Plate 2: E121 – Total Excavated Area ............................................................................................................. ix
Plate 3: E077 – The Bathhouse and associated Nabataean Structures ..................................................... x

Figure 1-1: Location of Humayma in the Near East .......................................................................................... 4
Figure 2-1: Jebel Qalkha - The Western Hill of Hawara ................................................................................. 21
Figure 3-1: The Platform of Square 02 ............................................................................................................ 37
Figure 3-2: Square 07 - Walls 03 and 04 in 1995 (Oleson) ............................................................................. 38
Figure 3-3: Detail of Arcadius Coin uncovered in 1995 [H95.0391.06] .................................................... 40
Figure 3-4: Walls 03, 04, 802 and 820 ............................................................................................................... 43
Figure 3-5: Wall 806 and the cut edge of the Surface .................................................................................. 46
Figure 3-6: Square 09 – Wall 805, Degraded Surface ................................................................................. 48
Figure 3-7: Structure B .................................................................................................................................. 49
Figure 4-1: The Platform of Square 02 ........................................................................................................... 53
Figure 4-2: The Platform – North Edges ........................................................................................................ 55
Figure 4-3: Structure A’s bonded north corner ......................................................................................... 58
Figure 4-4: Two mortars from the Platform ............................................................................................. 64
Figure 4-5: Statue Base from the Principia (Oleson) ................................................................................. 73
Figure 4-6: The four orientations of the Platform – from the top left going clockwise: facing west, facing north, facing south, facing east. (Reeves)............................................................. 77
Figure 4-7: Digital reconstruction of the Roman period E125 shrine (Kanellopoulos and Konstandopoulos) .......................................................................................................................... 79
Figure 5-1: Structure A in Phase 2 ............................................................................................................. 96
Figure 5-2: The interior of Structure A – Wall 802 and collapsed tumble ............................................. 98
Figure 5-3: Walls 03, 04 and 802’s southern extension in 1995 (Oleson) ........................................... 101
Figure 5-4: Walls 03 and 04 from the south, peculiar orientation of Wall 03’s blocks .......... 102
Figure 5-5: Floor 814 with oblong pits ........................................................................................................ 105
Figure 5-6: Structure B through Squares 08, 09, 12 and 13 ............................................................... 121
Figure 5-7: Wall 805 in Square 09, Structure B’s corner ......................................................................... 123
Figure 5-8: Walls 801 and 802, Structure B in Square 12 ..................................................................... 124
Figure 5-9: North baulk of Square 08 and the south edge of Square 09 – Wall 805 tumble ...... 127
Figure 5-10: Square 07 immediately before the 2008 excavation season with sand having filled
the 1995 probes.
Plate 1: Humayma Site Plan (Skinner)
Plate 2: E121 – Total Excavated Area
Plate 3: E077 – The Bathhouse and associated Nabataean Structures
Chapter 1

E121: Topography, Climate and an Introduction to Humayma

On the 24th of June 1995 under the direction of Dr. J.P. Oleson, excavation of area E121 at Humayma, ancient Hawara, was begun. This area was chosen for the 1995 season of the Humayma Excavation Project1 because a corner of a stone structure was visibly jutting out of the area’s shallow southern slope.2 Additionally, Oleson has indicated that E121’s proximity to a water division tank of the Nabataean aqueduct made it a probable location for an additional Nabataean period hydraulic structure.3 The 1995 excavation of E121, although uncovering interesting architecture and small finds, ultimately provided results suggesting a Late Roman / Early Byzantine date (fourth century CE) and little evidence for a hydraulic function.4 Thus, E121 was duly closed on July 11th, a time when that excavation season was moving into its final weeks and labor was needed elsewhere. Between June 24th and July 11th of 1995, however, several key elements for dating and understanding the phasing of E121 had been uncovered.

Thirteen years later, on the 5th of May 2008, a new team, led by the author, under the direction of Dr. M.B. Reeves reopened E121 to further the excavation and identify all the associated structures. Under Reeves’ directorship, the research goals of the Project have shifted more towards understanding the Roman to Early Byzantine vicus, the civilian settlement outside the Roman fort and identifying structures associated with it from different occupational phases. As the 1995 excavation seemed to point towards a fourth century CE construction, Reeves chose to reopen E121 in 2008 in the hope of uncovering a structure built during the Early Byzantine

---

1 Henceforth, the Humayma Excavation Project will be referred to as the Project.
2 Dudley in Oleson et al. 1995b, 42.
3 (J.P. Oleson, personal communication, 2009)
4 The Project uses several dating labels, derived from regional pottery studies. This discussion focuses largely on the Late Roman period, 235 CE – 324 CE, and the Early Byzantine period, 324 CE – 400 CE.
period occupation of the Roman fort.\textsuperscript{5} A full field season, six weeks, was allotted for its excavation, between May 5\textsuperscript{th} and June 15\textsuperscript{th} 2008. The 2008 season expanded upon the 1995 information and revealed a much larger, dynamic sequence of structures than was initially expected. This thesis will serve as an interim report for area E121.

Although the current overall research objective of the Project is the procurement and interpretation of information concerning the civilian and military relationships during the Roman and Byzantine periods of the site (second to fifth centuries CE), this thesis project is subject to several specific research goals: to review the 1995 fieldwork, present and explain the 2008 fieldwork, and review and reinterpret the latter and the former seasons together in order to deduce the probable phases and functions of the structures uncovered in E121. The 2008 fieldwork is of paramount importance; it is the bulk of the field research for this thesis. Moreover, it is in light of the material excavated in 2008 that the interpretations of the 1995 season can be reevaluated. This reevaluation of the 1995 material is presented throughout each chapter where topically appropriate. The interpretations of the E121 structures occupy the majority of the analytical research and are presented through each subsequent chapter.

Considerable background information about the excavation of E121 and more broadly about the topography, climate, occupational history and archaeological research of Humayma is needed to properly interpret E121.\textsuperscript{6} The remainder of this chapter provides a regional overview to the environmental and topographical characteristics of Humayma. Additionally, it presents the information necessary to locate the site of Humayma and E121 within it. Finally, it highlights the

\textsuperscript{5} (M.B. Reeves, personal communication, 2008); also, see Chapter 2 for a full discussion of the occupational phases of the site.

\textsuperscript{6} Chapter 2 addresses the various different names associated with the settlement during its historic phases, but for continuity and ease this discussion refers to the site as Hawara in association to the site in antiquity.
primary features of E121. Chapter 2 contributes a literature review, introducing the occupational phases of ancient Hawara as determined by the Project in its associated literature. Additionally, Chapter 2 introduces the individual scholarly studies needed to interpret E121’s cultural and scholarly context. Chapter 3 presents the previously unpublished accounts of excavation from the 1995 season and the new 2008 excavation. The subsequent chapters focus on the particular occupational phases of E121, working chronologically forward; thus, Chapter 4 highlights Phase 1 of occupation during the second to third centuries CE and Chapter 5 presents Phases 2 and 3, which are fourth century CE and later occupation. Both Chapters 4 and 5 present the ceramic and small finds data for their respective phases along with relevant local and regional contextual evidence. Chapter 6 is a conclusion with my own analysis of the chronology of E121, its historical significance and how it fits into the chronology of ancient Hawara. Although each chapter individually addresses the specific needs for further excavation, Chapter 6 also proposes a possible overall direction for E121’s future excavation. The following appendix include a complete list of all the finds from the 2008 season registered with the Department of Antiquities of Jordan as well as photos of those finds.
Figure 1-1: Location of Humayma in the Near East
1.1 Humayma: Geography, Climate and E121 Topography

Humayma, ancient Hawara (Plate 1), is a settlement located in the southern Hisma desert, part of the Aqaba region of modern Jordan (Fig. 1-1). The site was occupied for nearly 900 years between the first century BCE and the eighth century CE. Although the relocated modern town of New Humayma now lies along the modern Desert Highway, ancient Hawara was several kilometers to the west. In antiquity, not surprisingly, the town was situated along the ancient highway and trade route: the Nabataean period King’s Highway and the Roman period Via Nova Traiana. Hawara was located between the ancient city of Petra, 45 km to the north and the modern city of Aqaba, the ancient port Aila, 55 km to the south.\(^7\) Aqaba is at sea level on the northern tip of the Gulf of Aqaba, the eastern gulf formed by the Sinai Peninsula. Hawara is about 965 m above sea level. This area of the Hisma is flanked to the northeast by the dramatic sheer cliff face of the al-Shara escarpment rising to 1700 masl, to the east by white sandstone hills rising to 1200 masl and finally to the west by red sandstone hills rising to 1300 masl forming the tail end of the al-Shara mountains.\(^8\) The desert floor, framed by the hills, stretches south and southeast creating plains of loose, sandy loess and rocks with occasional outcrops. There are no permanent springs on the desert floor and groundwater was too deep for ancient technology to access.\(^9\) Hawara lies on the desert floor immediately adjacent to the western hills, about 30 km southwest of the escarpment, 25 km north of modern Quweira, at 29°57′016″N, 35°20′807″E.

Short, wet winters and long dry summers define the seasonal patterns. The settlement lies in a desert valley, which forms a natural water catchment zone. During its wet months the valley acquires a portion of run-off water from the surrounding higher hills and cliffs, with the

---

\(^7\) Oleson (submitted), Ch. 2. Chapter 2 of his submitted publication covers the topics of topography, geography, geomorphology, climate, and history in great depth including all of the associated scholarship. This subsection will simply condense that material into its most necessary components for this thesis.

\(^8\) Oleson (submitted), Ch. 2.
site at the focal point. Likewise, the wadi, or sandy dried river bed, along the site’s eastern edge seasonally floods bringing a short burst of immense amounts of water from the escarpment region. These topographical characteristics made the area preferable for settlement in the pre-modern era. With the help of aqueducts and storage basins constructed during the Nabataean period, a small permanent settlement was able to prosper (See Plate 1). On account of these man-made features and natural characteristics, Hawara became the only substantial settlement in the Hisma valley during the Nabataean, Roman and Byzantine periods.

Finally, the local topography of Humayma today, as it likely was in antiquity, is relatively flat with stones, loess and sand forming shallow ridges and occasional dunes. Small to large bushes dot the landscape, which is generally devoid of much growth during the summer excavation seasons. There are, however, several different species of desert flowers that bloom and enliven the area during the spring months as well as the grain planted by the modern Bedouin. Sandstone hills dominate the western and northern edges of the site while the escarpment can be seen in the distance to the northeast, as well as the Hisma stretching to the south, east and northeast. The Wadi el-Gharid passes by the eastern and southern edges of the urban center.

To facilitate mapping and recording, the archaeological site at Humayma is broken up into six large excavation fields (A – F). Each field has a focus, for instance Field B consists of structures situated around the two large Nabataean public cisterns (nos. 67 – 68). In addition to

---

9 Graf 1992; Eadie and Oleson 1986, 55; Oleson (submitted), Ch. 2.
10 Oleson 2007, 452.
11 Oleson 2007, 447.
12 Oleson 2007, 454.
13 Henry 1995, 18; Oleson 2007, 449; also see, Oleson (submitted), Ch. 2.
14 Oleson 1997, 178 – 179 provides a list of the species that grow in the area.
15 Oleson 1993, 462.
16 Oleson 1993, 462.
the geographic field designation, each excavation area of the site is given a number relative to when it was identified. Thus, E121 is located in Field E and is the one hundredth and twenty-first area designated. Field E’s most prominent feature is the Roman period fort, E116, whose truncated walls still dominate the landscape. Field E also includes the Roman to early Byzantine structures surrounding the fort, known as the *vicus*, as well as the Nabataean structures around the aqueduct-fed, Nabataean reservoir (no. 63).

E121 is 70 m north of this reservoir and 100 m west of the fort’s west gate. The modern road, the Nabataean aqueduct and likely the ancient roads, pass between E116 and E121. E121 itself is located on the northern edge of a large semi-circular depression in the topography, which is surrounded to the north, west and south with fields cultivated by the local farmers. The cultivated fields seem to shift slightly year-to-year and, as aerial photos and excavation suggest, have been closer to E121 in the past. On account of the topographical depression, the majority of E121 rests on a shallow east-west slope. This slope creates a distinct mound, which is much larger than the total excavated area. The mound may indicate the presence of a larger buried structure to the east-northeast of the excavated areas. This possibility will be discussed in Chapter 6. The soil of the area was, for the most part, identical to the soil found elsewhere on the site: loose to firm sandy loess with distinct reddish to light brown color. Any significant variation from this will be mentioned, but otherwise this type of soil should be assumed. Although dry during the summer, the soil is rather fertile, the most obvious result being the growth of bushes between each excavation season.

The geography and topography are not the primary focus here but this introduction sets the scene for E121. The limestone cliffs of the al-Shara escarpment to the north and the tail end

---

17 Reeves *et al.* (forthcoming).
18 Kennedy and Riley 1990, 146 Fig. 89.
of the hills to the west are both fundamental features necessary for interpreting and understanding the history of the site introduced in Chapter 2. The structures around E121, both modern and ancient play an important contextual role as well. The Roman fort, the aqueduct, the other Field E structures and the modern cultivated fields all contribute to the local context of E121. Other structures are introduced throughout the course of this discussion as needed.

1.2 E121: A Brief Introduction to the Area

The primary research goals of the Project provide the foundation for interpreting E121. Although the excavation field research is presented in Chapter 3, it is necessary here simply to introduce the primary elements and structures of E121 in order that some topical context can be applied to the Chapter 2 Literature Review. It is also important here to stress what the purpose of E121’s excavation was. Although the initial intentions for excavating E121 are important, the questions that arose on account of the excavation make up the majority of the material covered in this thesis.

As noted, the research goals of the Project by 2008 focused on understanding the relationship between the civilian vicus and the military garrison. E121 was chosen for excavation because it contained structures in the vicus, which, according to the 1995 excavation data, suggested an Early Byzantine period foundation. This date is crucial because up until the 2008 season, there was only evidence for Roman development in the vicus area during the second and third centuries CE. While the occupational phases of E121 are presented in Chapter 2, it is important here to know that the military presence is archaeologically represented in the Roman fort from the second to late fourth century CE. Filling in the fourth century CE gap in vicus development was the original, primary reason for excavating E121. Strengthening the evidence
for fourth century CE *vicus* development would permit a deeper understanding of how the civilian and military relationship changed through nearly three centuries of occupation.

Although this fourth century CE occupation was the initial intention, this focus developed and grew as excavation progressed. Multiple occupational phases are very common to Hawara, so it was not entirely surprising to uncover evidence for occupation at E121 before and after the fourth century CE. The focus of the excavation during the 2008 season grew from simply understanding and developing the evidence for fourth century CE *vicus* growth to unraveling the occupation phases of E121 entirely. The secondary objective was to develop a series of plausible functional interpretations for the structures and elements of E121. Collectively, these objectives, and the goals of the Project, make up this thesis.

Plate 2 most effectively shows the results of the E121 excavation. Although little about the occupational phases is represented, it presents most of the elements that make up the majority of this thesis discussion. For the purposes of making the literature review accessible there are five elements that need to be recognized: the Platform, Structure A, Structure B, the Surface and, not seen on Plate 2, a large layer of ash situated on top of the Surface. These five elements represent the different phases of E121 and contribute to the overall goals of the Project. They are grouped and interpreted in terms of their occupational phases in the following chapters.

### 1.3 Concluding Thoughts and Considerations

It is important to remember that these results are largely preliminary. Multiple contrasting conclusions are drawn concerning the structures introduced above. These conclusions, developed mostly from comparative research, will hopefully guide further research and excavation in the area. The interpretations are narrowed down to those most plausible, relative to their overall representation in the local and regional archaeological record but also kept
conservative. It is important to bear in mind that future excavation could very easily redefine them, just as the 2008 excavation was able to highlight characteristics the 1995 season did not consider.

This cycle of excavation, interpretation, further excavation and reinterpretation highlights one of the primary research methods of this thesis as a research project. This project was possible because fieldwork, though unpublished, had been conducted at E121. The 1995 field notes provided, albeit in a limited capacity, a reference point for comparison and a springboard for further interpretation. Though many of the 1995 ideas have been altered, the opportunity to use that unpublished material has been crucial. Although the 2008 excavation of E121 was new research, it was carried out with the unpublished reports and the Project’s research objectives in mind. I intend to show in this thesis that the Platform, Structures A and B, the Surface and the ash are all interesting elements on their own. In addition, they all contribute to our understanding of Hawara’s *vicus* during multiple phases and in that way are valuable to the current goals of the Project.
Chapter 2

Introduction to Ancient Hawara: A Literature Review

The literature concerning ancient Hawara is limited largely to archaeological survey, preliminary archaeological reports and several primary source references to the area. Other more interpretive discussions have been published, but the surveys and preliminary reports make up the bulk of the site material. As E121 itself has not been published, this literature review will focus more broadly on the historical development and scholarship of the site itself, coupled with the necessary topical overviews drawn from that material. Naturally, not every aspect of Hawara is crucial to E121, but the development of scholarly interest in the site is beneficial for understanding why E121 was chosen for excavation. In addition to this, understanding specific historic occupations of the site is crucial for determining the phasing and character of E121. This review should provide enough background to put E121 into its historic, archaeological and scholarly context. More specifically, this literature review presents an academic overview of research goals, a review of the pertinent occupational phases of Hawara from its Nabataean foundation to the end of the Roman fort’s occupation in the late fourth century CE and several specific archaeological topics related to E121.

2.1 Scholarship at Hawara: Developing Interest and Research Goals

Modern research at Hawara began during the first half of the 20th century with broad but intensive surveys of Arabia and Palestine. Although early 19th century explorers like Laborde and de Bellefonds had passed through the site and produced excellent descriptions, they were not particularly concerned with its historical significance.19 Later, Maughan retraced Laborde’s steps

19 Oleson (submitted), Ch. 2; cf. Laborde 1830, 61 – 62 quoted in Augé and de Bellefonds 1994, 200 – 201; Eadie (1984) cautions the use of these early explorers stating that their travels reveal more about their intentions than the history of the site.
passing through Hawara and also provided a description of the site in his 1874 publication.\textsuperscript{20} It is not until Alois Musil, however, in his 1926 publication on his travels in the Northern Hegaz, that the site was identified as the Nabataean city of Hawara.\textsuperscript{21} Musil also identified the primary source references to the site in his extensive footnotes.\textsuperscript{22} His description of the site, although brief, does provide some important details worth noting, especially the lack of any standing buildings. Additionally, he does rightly suggest that excavation of the heaps of limestone and sandstone would reveal monuments and other domestic structures.

Following Musil’s survey, Stein and Alt separately passed through the site in the 1930s, both with a specific focus on the \textit{Via Nova Traiana}. Stein most importantly highlights the lack of both milestones and a paved road at the site.\textsuperscript{23} He suggests the absence is likely on account of the heavily sanded Wadi el-Gharid along the site’s eastern edge. The observation is particularly important to the 2008 season’s attempt to determine the nature of the \textit{Via Nova Traiana} at the site, which shares a particular relationship to the Surface of E121.\textsuperscript{24} Additionally, Stein proved Musil’s identification of the site by comparing the distances between Sadaqa, Hawara and Aila with those from the \textit{Tabula Peutingeriana}.\textsuperscript{25} Alt’s account of his passage through the site was more detailed, mentioning specific structures, notably the churches. His work also included several early photographs, which were later used by Oleson and Schick to identify Church B126 being reused as a Bedouin house.\textsuperscript{26} Although Alt’s work is not particularly crucial to E121’s interpretation, the identification of Church B126 is an important example of the reuse of building

\begin{thebibliography}{99}
\bibitem{20} Oleson (submitted), Ch. 2; Maughan 1874, 194 – 196.
\bibitem{21} Musil 1926, 59; Musil based his assessment on several primary source references to the site, specifically Ouranios’ reference to the foundation myth of the site copied by Stephen of Byzantium. See: Meineke 1949, 144 and below in section 2.2.1.
\bibitem{22} Musil 1926, 59 – 60.
\bibitem{23} Stein 1940, 437.
\bibitem{24} Reeves et al. (forthcoming).
\bibitem{25} Stein 1940, 437; cf. Parker 1986, 104.
\end{thebibliography}
materials, a characteristic of the site discussed in Chapter 5. During the 1930s Nelson Glueck also did a survey of eastern Palestine, during which he passed through the Hisma desert valley.27 His survey of sites, however, does not mention Hawara in particular, but does cover several nearby settlements such as Quweira. Glueck’s work is important primarily because he surveyed the hills west of the site and mentions the presence of cultic niches there, a contextually important detail for the discussion of the Platform in Chapter 4. In the 1940s Kirkbride and Harding also passed through the site during their survey of the Hisma, but sadly characterized Humayma as a “dreary waste of tumbled block.”28

While the 1930s and early 1940s were a very busy time for research of the Via Nova Traiana and regional surveys, there was a general decline of scholarly activity in southern Jordan in the following decades. This period did, however, see several specific developments at the site. For instance, in 1962 the Department of Antiquities of Jordan cleared out one of the Byzantine period churches, known as the Lower Church, C101.29 In 1979 U.N.E.S.C.O. relocated the population of the town to New Humayma 15 km east along the modern Desert Highway to conserve the site.30 Similarly, the conservation and redevelopment group CARE, funded by the Government of Canada, in the 1970s assisted in local redevelopment, which included the construction of several modern buildings and the restoration of one of the cisterns (no. 67).31 Although none of the groups was particularly motivated by specific research purposes, their activity is still worth mentioning. Academic interest in Nabataean and Roman Jordan, however, did begin to grow following Bowersock’s call for further research into Provincia Arabia in

26 Alt 1936, 94 – 95 (plate 3B); also see Oleson et al. 1999, 430.
28 Kirkbride and Harding 1947, 21.
30 Oleson et al. 1989, 270.
31 (M.B. Reeves, personal communication, 2009).
1971. Between 1976 and 1979, this call was answered separately by Parker and Graf in their preliminary surveys on Nabataean-Roman military sites in Jordan. Parker’s was the larger of the two with a focus on the entire *Limes Arabicus*, whereas Graf’s was a more focused survey of southern Jordan in particular. Both were largely interested in Humayma’s Roman fort and highlighted the possible value of further research at the site. Their works galvanized more focused research leading eventually to the creation of the Humayma Hydraulic Survey and its successor the Humayma Excavation Project in the 1980s, 90s and the present.

Eadie with Oleson and Graf conducted the first modern research solely dedicated to Humayma in 1983. Eadie’s original survey of the site and its environs had lofty goals, which included a complete mapping of the ancient settlement and its roads, an investigation of the water system and a preliminary assessment of the ceramics. Although the goals were not fully accomplished, they set the framework for further research of Hawara and produced extraordinary preliminary results. The 1983 survey is particularly important to understanding why E121 was chosen for excavation in 1995. During the survey, Oleson first analyzed the Nabataean reservoir (no. 63) and its associated aqueduct. It was determined that a water-division basin may have existed about 87 m to the northeast. E121 is immediately downhill from the ruins of that basin, near the aqueduct and the reservoir itself. Such details led Oleson to open E121 in 1995 in search of further hydraulic features.

The primary success of the 1983 survey was its indication of the site’s immense amounts of occupational evidence and extensive hydraulic infrastructure. Thus, Eadie’s preliminary regional survey was followed with Oleson’s Humayma Hydraulic Survey. This three-year project

34 Eadie 1984, 214.
35 Eadie 1984, 217; Eadie and Oleson 1986, 63 – 64.
between 1986 and 1989 was a focused extension of the hydraulic research from the previous regional survey. The first season examined the 240 km² natural water catchment area surrounding the site cataloguing all natural sources of water.\textsuperscript{36} The second season catalogued all the cisterns and reservoirs in the habitation area.\textsuperscript{37} Finally, the third season conducted focused excavation of the bathhouse (E077) and several cisterns to develop a preliminary chronology of the site.\textsuperscript{38} Although E121 was not a part of it, this hydraulic survey principally reinforced Hawara’s importance for understanding hydraulic technology. Additionally, though, the hydraulic survey, through its focused excavation, proved the occupation of the site from the Nabataean period in the first century BCE through to the Abbasid period in the eighth century CE.

With this spectrum of occupation clear, Oleson proposed the Humayma Excavation Project in order to conduct further excavation on other public and private structures to complement the information already gathered concerning the water supply system.\textsuperscript{39} The overall goal of the Project was an extension of the regional survey’s goals: to acquire a well-rounded understanding of the occupational phasing for the settlement. For the first two seasons (1991, 1992) excavation occurred on two of the Byzantine churches of the site (B100, C101) as mentioned by Alt, along with the Byzantine church/Islamic period houses (F102) and the Islamic Abbasid qasr (F103) on the southeast edge of the urban center.\textsuperscript{40} A survey of the tombs in the western hills was also begun. Led by Oleson, Schick has conducted extensive research on the

\textsuperscript{36} Oleson 1987, 254 – 259.
\textsuperscript{37} Oleson 1988, 157 – 169.
\textsuperscript{39} Oleson et al. 1993, 462.
\textsuperscript{40} These periods also coincide with the majority of the primary source references to the site. From the Byzantine period Hawara is mentioned in the Notitia Dignitatum, the Beersheba Edict and the Tabula Puetingeriana. From the Islamic period, several historians mention the site as the former residence of the Abbasid family before their rise to the Caliphate.
Byzantine period and early Islamic period whereas Foote has focused more specifically on the Islamic period *qasr* (F103).\(^{41}\) Similarly, ‘Amr focused particularly on F102 and the Byzantine churches.\(^{42}\) The Byzantine to Islamic period represented by these structures is not of particular importance to the research of E121 so further discussion is not necessary. That being said, Oleson also conducted further excavation on the Nabataean cisterns, which are contextually important for E121.\(^{43}\)

In 1993 excavation expanded to incorporate the Roman period fort on the site, E116. Although the earliest excavations of the fort also do not provide the most crucial information for understanding E121, its continued excavation set a baseline for understanding Roman occupation at Hawara. By the 2005 excavation season, several structures in the fort had been probed, the phasing was more conclusively understood and significant portions of the architecture were catalogued. This knowledge is crucial to understanding E121’s phasing as well as that of the whole site between the second and fourth centuries CE. Further discussion of the Roman period and the site’s phasing is presented below.

Between the 1993 season and the 2005 season, there were eight excavation seasons, which progressed the overall goals of the Project. In addition to the fort, several other structures were excavated representing different periods of occupation. The most important structures for interpreting E121 all originate from Field E, the *vicus* area surrounding the fort and the fort itself. These structures are E077, the bathhouse and adjacent structures, E122, a Roman and Islamic period house, E125, a large Nabataean/Roman period *insula* containing a community shrine and

---


\(^{42}\) See: ‘Amr in Oleson *et al.* 1993, 1995, 1999; ‘Amr and Schick, 2001. ‘Amr did not solely work on the later phases of Humayma but also excavated E122, and began the excavations of E125.

E128, a Nabataean/Roman period structure of yet undetermined function.\textsuperscript{44} The open Nabataean reservoir, no. 63 and the aqueduct are also in Field E.\textsuperscript{45} With the exception of E077 and the other hydraulic infrastructure, which were begun during the Humayma Hydraulic Survey, each structure has been excavated between 1995 and 2005.\textsuperscript{46} Since 1996, Reeves has conducted much of the research concerning the civilian \textit{vicus} with a particular focus on characterizing the relationship between the Roman military and the civilian communities.

This characterization has, as of 2008, become the major research objective of the Project currently under the direction of Reeves. After eight seasons of excavation, the site’s occupational phasing had become clear and an emphasis was put on the excavation of structures that would help identify the dynamic of the military / civilian relationship. This focus is particularly indebted to Reeves’ study of E077, E125 and the community shrine present within it.\textsuperscript{47} The community shrine specifically indicates a strong, shared relationship between the civilian and military communities. This relationship is an immensely important feature for understanding the \textit{vicus} and is explored in Chapter 4’s discussion of the E121 Platform.

By the 2008 season, under Reeves, the Project focused its excavation solely on the \textit{vicus} area.\textsuperscript{48} An emphasis was set on determining the phasing and strengthening the evidence for occupation in the \textit{vicus} between the first and fifth centuries CE. On account of the 1995 evidence

\textsuperscript{44} Oleson 1989; Oleson \textit{et al.} 1999; 2003; 2008.
\textsuperscript{45} It should also be noted that reservoir no. 63 was also cleared out by the Department of Antiquities of Jordan in 2001 - 2002. This clearing has allowed for further interpretation of the reservoir as possibly being a reflecting pool and an ostentatious display of wealth as opposed to a structure solely dedicated to the infrastructural livelihood of the settlement. See: Oleson (submitted), Ch. 4. For this discussion, however, this structure is referred to as a reservoir.
\textsuperscript{46} This is partially why it is possible to interpret E121 more effectively now. Prior to the 1995 excavation season, there was not a large body of academic work to draw from for interpretations of structures at Hawara.
\textsuperscript{48} Schick and Foote continue to study primarily the structures from the Byzantine and Islamic periods near the center of the town (Fields B and C). Reeves, however, has focused on the \textit{vicus} (Field E).
for a fourth to fifth century CE occupation, E121 was reopened to expand upon that evidence in order to identify fourth century CE *vicus* occupation. This corresponds to the latest occupation of the fort. Additionally, E121 was the most northern *vicus* structure, so its excavation could expand the knowledge of the *vicus* beyond those structures clustered outside the southwest corner of the fort. Other areas of the *vicus* excavated in 2008 included E077, E128, E129 and E130. As a result of the 2008 season, several key points about the *vicus* have been answered.49 Those to which E121 has contributed, are presented in Chapter 6.

### 2.2 Hawara’s Historical Occupation: Archaeology and Literature

As has been briefly stated already, Hawara was occupied extensively from the first century BCE to the eighth century CE. The antique occupation was followed by limited medieval and modern reoccupation in the Fatamid and Ottoman periods until the 20th century CE. Not all of this occupation is important for understanding E121. Rather, the period from the mid to late second century CE to the early fifth century CE is most important. In terms of historical occupation, this period of Hawara is largely defined by the occupation of the Roman fort and is the period of the *vicus*’ development. The mid second century CE to the early fourth century CE is typically referred to as the Roman period of Hawara. After the reign of Constantine, however, the fourth century CE is typically referred to as the Early Byzantine period, though the Roman fort was still in use. Before the Roman period was the Nabataean period, which dated from the site’s foundation in the mid first century BCE to the early second century CE, when the Emperor Trajan annexed Arabia in 106 CE. Although E121 does not have Nabataean period occupation, recognizing the Nabataean cultural presence at the site, particularly in the *vicus*, is very important for understanding the subsequent Roman period community. The literature concerning the

---

49 Reeves et al. (forthcoming).
Nabataean period and the Nabataean cultural legacy at Hawara during the occupation of the Roman fort is presented below. Naturally, the literature concerning the Roman occupation at Hawara also needs introduction in addition to the literature relating to the regional context of these periods. For clarity’s sake, this review is in chronological order, starting with Hawara’s mythical and Nabataean foundation.

2.2.1 Mythological Foundation: Historic Perception of Hawara

Hawara’s foundation myth is important because it highlights the Nabataean character of the town in later periods. Additionally, it also provides a useful background for discussing the Platform in Chapter 4. The myth comes from Stephen of Byzantium, a sixth century CE geographer, who quotes in his Ethnika the text of the myth as recorded by Uranius, a notable fourth to sixth century CE writer.⁵⁰

Ἀὔαρα: πόλις Ἀραβίας, ἀπὸ χρῆσιμοῦ δοθέντος Ὀβόδᾳ κληθέσα ύπὸ τοῦ ὑσοῦ αὐτοῦ Ἀρέτα. ἔξωρμησε γὰρ Ἀρέτας εἰς ἀναζήτησιν τοῦ χρῆσιμοῦ· ὃ δὲ χρῆσμός ἦν αὔαρα τόπον ζητεῖν, ὃ ἦστι κατὰ Ἀραβίας καὶ Σύρους λευκήν· καὶ φθάσαντι τῷ Ἀρέτᾳ καὶ λογίζεται ἐφάνη φάσμα αὐτῷ λευκοείμων ἀνήρ ἐπὶ λευκῆς δρομᾶδος προϊόν. Ἀφανισθέντος δὲ τοῦ φάσματος σκόπελος ἀνεφάνη αὐτόματος κατὰ γῆς ἐρριζωμένος, κύκει ἔκτισε πόλιν.  
(Stephen of Byzantium i.532.1-6 [= Billerbeck 2006, 302 - 303; = Meineke 1849, 144])

Auara: a *polis* in Arabia, was so named from an oracle given to Obodas by his son Aretas. Aretas set out to investigate the oracle, for the oracle said to search for a place ‘auara’, which in Arabian and Syrian is ‘white’; and as Aretas was first arriving and lying in wait, a phantom appeared before him as a man clad in white riding forth on a white dromedary; but when the phantom disappeared, a peak appeared without apparent cause.

⁵⁰ Uranius is a trustworthy but limited ancient author. He is well known through Stephen of Byzantium for writing his Arabica: an account of the region and peoples of Arabia. Oleson (submitted, Ch. 2) however, points out that it is unclear why he ‘chose to be a “Josephus” for the peoples of Arabia.’ The dates of Uranius are also unclear, but he was certainly a Late Antique writer. He is a very important source to all scholars researching ancient Arabia. Uranius is discussed by several modern authors including, but not exclusively, West (1974), Bowersock (1997, 2003), Oleson (submitted, Ch. 2).
firmly rooted in the earth; and there he founded the polis. (My translation)

Although the myth should not be taken at face value, it provides an interesting reference point for this literature review and historical outline. The myth refers to several valuable features: the prince and future king, Aretas – most likely Aretas III (84–62/59 BCE) – a place designated as auara and a peak.\textsuperscript{51} Auara, as the settlement’s name stated at the beginning of the myth, is important because it allowed Musil to effectively identify the area as the ancient site of Hawara.\textsuperscript{52} Although the suggestion of auara as the colour white is also enticing, one should consider that this is a sixth century CE author, quoting a fourth to sixth century CE author, making reference to the definition of a word in another language and culture from the first century BCE. Moreover, colour interpretation in ancient cultures remains a confusing topic of scholarly debate, let alone sixth century CE views of first century BCE colours from foreign languages.\textsuperscript{53} Regardless, a discussion of what the white ‘thing’ of Hawara is continues to be a popular topic that includes such interpretations as the white hillocks of Disi sandstone around the site, breeders of white camels and a prevalence of white flowering plants.\textsuperscript{54} Most recently, Oleson and Reeves have each associated the term auara with the concept of rain-fed land and by extension fertile desert land.\textsuperscript{55}

\textsuperscript{51} Aretas III is the most likely candidate for this myth for several reasons, most notably because the ceramic evidence at the site begins c. 50 BCE. Aretas IV could be a possible candidate for the myth as well, but his biological father was not Obodas. See: Oleson submitted, 2007: 447; Fiemi 1990, for a recent list of kings.

\textsuperscript{52} Musil 1926, 59 – 61 n. 20.

\textsuperscript{53} Eleanor Irwin, although not dealing with the interpretation of late antique colour terms, has done considerable research concerning colour terms in Greek poetry. Her definitive work, \textit{Colour Terms in Greek Poetry} (1974), is dated now but provides ample discussion highlighting just how complex the issue of colour terms is in ancient sources. Since this example is a Greek transliteration of a Syrian word, it is unclear exactly to what colour the author was referring to.

\textsuperscript{54} Oleson 2004, 447; Reeves, (forthcoming).

\textsuperscript{55} Reeves (in preparation); Oleson (submitted, Ch. 2)
The next interesting feature of the story is the peak or lookout. This description is also rather vague, but is, on the other hand, apt since craggy hills flank the western and northern edge of the site. The western edge of the site is dominated, in fact, by one substantial hill, Jebel Qalkha, which could very easily serve as some high lookout point (Fig. 2-1). Reeves has argued that the community shrine of E125 is oriented towards this hill and that the hill held some sacred significance. Thus, the myth does seem to reflect the important topography of Hawara well, but the myth’s vagueness could very easily describe many different local areas. The myth’s primary value remains the identification of the site through the area’s name and the foundation of the site with the mention of Aretas. The suggested period of his reign is the mid first century BCE, which comfortably coincides with the earliest ceramic evidence from Hawara.

![Jebel Qalkha - The Western Hill of Hawara](image)

The evidence suggests that E121 does not date to this very early period of occupation. Thus, the myth’s value to E121 lies in its ability to highlight the pervasiveness of Nabataean cultural elements during later occupations. This is supported by the fact that the myth originates

---

from the later author Uranius whose original source is unknown. This idea of continued Nabataean cultural prominence is not something solely expressed in literary accounts like these; in fact Parker has pointed out that in southern Jordan the Nabataean ceramic tradition also continued far longer than it did in northern Jordan and Syria.\textsuperscript{59} Moreover, several authors have documented a resurgence of Nabataean cultural expression regionally after the Roman occupation starting in the late second century CE.\textsuperscript{60} This feature is particularly important and is discussed later in this chapter as well as in Chapter 4.

Such cultural longevity can, at least partially, validate a Nabataean cultural interpretation of a later construction, like the Platform. This is especially true when obvious parallels can be drawn between later period structures in culturally Nabataean contexts, like the E125 shrine. Since a Nabataean cultural presence likely continued to exist at Hawara after the occupation of the Roman fort, this idea of cultural identity is clearly necessary to understand how the Roman garrison and civilian community interacted. Thus, as the myth and the archaeological work suggest more broadly a Nabataean cultural presence, the Project is trying to refine the character and chronology of it for Hawara specifically.

### 2.2.2 Nabataean Hawara: first century BCE to early second century CE

Although the myth is interesting, the archaeological legacy of the Nabataean period is presently mainly understood through the Nabataean contributions to the site’s hydraulic infrastructure.\textsuperscript{61} The Nabataean occupation of the site from the mid first century BCE to the beginning of the second century CE provides fundamental insight into how and why such a strong cultural identity arose and lasted through much of the Roman period. The hydraulic ingenuity of

\textsuperscript{58} All photos, unless otherwise stated, were taken by the author.  
\textsuperscript{59} Parker 2006, 363.  
\textsuperscript{60} Bowersock 1990, 33; Patrich 1990, 73 – 75.
the Nabataeans promoted a sedentary lifestyle and was one of the primary reasons for the continued occupation of Hawara.\textsuperscript{62} Oleson’s surveys have documented 61 cisterns and the site’s three aqueduct-fed reservoirs and three run-off fed reservoirs within a 240 km\(^2\) catchment area as well as a 27 km of aqueduct delivering spring water from the al-Shara escarpment.\textsuperscript{63} In total, this meant that 4766 m\(^3\) of water could be stored in the catchment zone of Hawara; this was enough to sustain and promote a small population with livestock.\textsuperscript{64} This monumental achievement was, of course, dependent on the natural topography of the area. Today it still sustains modest agriculture as it did in antiquity.\textsuperscript{65} This agriculture has likely caused some of the current decay of E121.

Reliable access to water naturally made Hawara a perfect place for the continued urbanization of the Nabataeans during the first century BCE.\textsuperscript{66} Likewise, the magnitude of hydraulic construction projects in the area seems to indicate some form of central organization and sponsorship, likely from the same royalty mentioned in the foundation myth.\textsuperscript{67}

This infrastructure has a two-fold importance for E121. Broadly, it accentuates one of the reasons why the site was of interest to the Romans after their annexation of Arabia. The scale of Hawara’s hydraulic infrastructure naturally could support a modest contingent of Roman troops along with whatever local population remained or arrived afterwards. Whether Nabataean

\begin{itemize}
\item \textsuperscript{62} Oleson 2004, 353 – 357; 2007, 452.
\item \textsuperscript{63} Oleson 2007, 452.
\item \textsuperscript{64} Oleson 1997, 176 – 177.
\item \textsuperscript{65} Reeves (forthcoming) more fully discusses the relationship between the local topography, the foundation myth, and sustainable sedentary livelihood.
\item \textsuperscript{66} Urbanization has been discussed more extensively in the context of Nabataean Petra (see: Parr 2007). Although Humayma seems to follow a similar model (Oleson 2007, 450), the model itself is dependent on several larger economic and political factors, notably Roman imperial expansion in the east starting with Pompey and his lieutenants in the mid first century BCE (see: Ball 2000, 60 – 64; Bowersock 1983, 28 – 44; Millar 1993, 27 – 127; Sartre 2005, 32 - 150). In the face of such imperial growth, there certainly would have been a precedent to urbanize in order to protect Nabataean dominance over land trade routes in the Arabian Peninsula. These topics, however, remain beyond a Humayma literature review.
\item \textsuperscript{67} Oleson 2007, 452.
\end{itemize}
cultural longevity can be associated with the continued use of the Nabataean hydraulic infrastructure is not determinable. The infrastructure, however, certainly was the longest lasting feature of the Nabataean occupation, staying in use even after the end of the Roman fort’s occupation by the early fifth century CE. Moreover, not only did the hydraulic infrastructure ensure that a civilian population could endure through Roman occupation, it played at least some role in furthering military and civilian discourse. This is particularly noticeable on account of an aqueduct fed pipeline that ran directly into the E125 community shrine’s temenos.\footnote{Oleson et al. 2003, 49 – 50; 2008, 314 – 316.} Details like this are specifically important to E121 because the area is adjacent to the aqueduct’s division tank and there is some indication of a pipe-trench in the Surface, which is discussed in Chapter 5.\footnote{Eadie and Oleson 1986, 63 - 64}

The civilian \textit{vicus} is not from the Nabataean period as a \textit{vicus} by definition is the settlement that evolves outside of a Roman fort.\footnote{Sommer (1984, 3 – 5) provides a complete discussion on what classifies as a \textit{vicus}.} It is, however, worth mentioning that there is evidence for habitation in Field E during the Nabataean period. Reeves, for instance, has identified Nabataean phase buildings in Field E125 that have individual but abutting foundation walls. This building technique contrasts with the Roman phase of E125 in which separate structures share party walls.\footnote{Oleson et al. 2008, 312; also see Adam (1994) for a more complete discussion of Roman building techniques and materials.} A Nabataean phase for E125 is very important because it indicates that the Nabataeans, not the Romans, were responsible for the shrine’s specific orientation, which has been associated with the foundation myth and the promontory discussed above. This would support the idea that the orientation towards the hill is a Nabataean cultural property, despite being documented in a much later source. Additionally, leveled Nabataean period structures were found in E077 beneath the south and west edges of the Roman/Byzantine period bathhouse.\footnote{Oleson 1990, 294 – 306; Reeves \textit{et al.} (forthcoming).}
The orientation of these Nabataean structures and the bathhouse is also valuable to E121 as is discussed in the following chapters. Despite these Nabataean structures, Field E was not the center of the Nabataean period settlement. Survey done by Blétry-Sébé in 1990 suggests the existence of several structures, situated around cisterns no. 68 – 69 (Plate 1). Field E and the vicus, however, likely become far more prominent during the Roman occupation because of the aqueduct and fort.

2.2.3 Roman Occupation and the vicus: early second to late fourth century CE

The Roman period of Hawara, Havarra as it is in Latin, is the site’s second occupational phase. This period, of course, contains the Roman fort (E116) as well as the currently excavated structures within the vicus (E077, E122, E125, E128). Oleson has conducted the primary research on the fort and the structures within it. In conjunction with this, Reeves has pursued excavation in the vicus area. Oleson and Reeves have each provided the significant local phasing.

As for Hawara, excavations in the Roman fort (E116) during the mid 1990s up to the 2005 season, have produced enough evidence to date how long the Roman occupation in Hawara lasted. Moreover, Oleson’s research has been able to break down the occupations of the fort, and by extension the military occupation of Hawara, into three clearly represented phases. These phases are crucial as they provide a backbone and reference point for understanding the phasing of the entire site, especially the vicus. Reeves’ work has produced similar temporal periods

73 Blétry-Sébé 1990, 315, fig. 1, 317.
74 Oleson 2007, 452
75 Regionally, much of the occupational phasing is understood through epigraphy. Additionally, Semitic, Latin, or Greek epigraphy is the most important resource for understanding the relationship the Romans developed with the local populations. Both locally and regionally, there are several important inscriptions presented within this discussion. Al-Talhi and Al-Daire (2005) in particular present a new inscription from Hegra illuminating this topic considerably.
76 Oleson et al. 2008, 319 - 331; 2003, 40.
regarding E125’s phasing and the surrounding vicus structures. Fortunately, these phases date to known points in Roman history and remain reliable. They are particularly important for generating a clear sense of likely occupational phases for E121, which was abandoned and occupied more than once.

Oleson has indicated that the first phase and the foundation of the fort occurred in the early to mid second century CE, after 106 CE. The exact date of the foundation is not known but it is evident from numismatic and historical sources that the Roman Emperor Trajan annexed and reorganized the Nabataean kingdom into Provincia Arabia c. 106 CE. The fort was constructed shortly afterwards. The second century CE foundation date for the fort is interesting because it means that it is one of the few large Roman forts in Provincia Arabia from this period. The closest other large second century CE Roman fort is the Legionary Headquarters at Bostra. This not only means that Hawara’s fort was regionally isolated during the second to third centuries CE, but also likely held some strategic importance. Following its construction, the vicus also developed, with construction at E125, E122 and the E077 bathhouse. This growth would have been especially noticeable in the rural settlement of Hawara.

The large size of the fort naturally required building materials, which were easily obtainable from the Nabataean settlement. This action is important to note since it resulted with the Romans acquiring Hawara’s best building materials, cut ashlar blocks. As a reused building material, the presence of such blocks is helpful for suggesting Roman period occupation,

---

77 Oleson 2007, 452.
78 Ball 2000, 60 – 64 provides a summary of the Roman annexation; Kennedy 2004, 38 – 41 gives a list of later primary sources discussing the annexation since no contemporary historical sources exist.
79 Oleson 2007, 452
81 Oleson 1990, 298; Oleson et al. 1999: 426; 2008, 312. Note: E128 also shows some sign of development, but it is not entirely clear whether it was before or after the construction of the fort. See: Reeves et al. (forthcoming).
especially when more conclusive evidence is unavailable. This feature is particularly critical for E121, which does employ a mixture of ashlar masonry and boulder construction, but has limited ceramic evidence. Once the fort was built, it dominated the landscape and loomed over the original settlement from its northeast edge. E121 was built immediately west of the fort’s west gate likely during the first phase of the fort’s occupation, contemporaneous with the other vicus structures mentioned above.

Roman authority lasted unbroken until the second half of the third century CE at which point the fort was temporarily abandoned and the second Roman phase began. The events that might have led to the abandonment of the fort are unclear, although it has been suggested that it may have been a result of the Zenobia revolt of c. 270 – 272 CE. Oleson has also pointed out that in the numismatic record of Hawara, Diocletian is not represented, which could suggest an abandonment during that period. The abandonment of the fort also coincided with the abandonment of much of the known vicus. E122 and E125 both go out of use; E125 maintains only squatter reuse in the following periods and E122 becomes a dumping ground for the bathhouse. E077’s bathhouse is also abandoned but only temporarily. As Reeves has indicated, the permanent abandonment of the E125 shrine after this period is particularly telling of the changing relationship between the civilian community and the Roman military authority, as

82 Oleson et al. 2008, 318; Reeves in Oleson et al. 1999, 425. The Zenobia revolt has been blamed for much of the destruction in the area during this period, including parts of Petra but most distinctly in Bostra. Graf (1989) provides a good overview of Zenobia’s actions as well as the historical sources, particularly the contemporary epigraphy from Bostra. Potter (2004) offers an historical account of the revolt, as well as a discussion of Zenobia’s legacy. Shahid (1984) interestingly deconstructs the impact of the Zenobia revolt to the Arab Roman relationship and his work remains one of the primary sources in the discussion of Arab Roman relations.
83 Oleson (submitted), Ch. 2.
85 Oleson 1990, 298 – 299; Reeves et al. (forthcoming).
well as the cultural identity of the *vicus*. It seems likely that E121 was also temporarily abandoned at this point. This military departure, however, was not permanent and the fort was reoccupied in the early years of Constantine’s reign with a smaller contingent of troops. It is possible that the reoccupation was partly due to Diocletian’s reorganization of the Roman frontier defense strategy.

It should be noted that several provincial administrative changes occurred at this time; the most significant among these was the restructuring of the eastern provinces. Although this particular change cannot definitively be associated with Diocletian’s reorganizations, it is clear that by the mid fourth century CE the Hisma and other parts of Southern Jordan became part of the province *Palestina Salutaris* and shortly after *Palestina Tertia*. Gutwein’s 1981 work offers one of the more complete studies of this complicated bureaucratic transition. Although this administrative delineation does not necessarily change archaeological interpretation, it is important for identifying Hawara in later literary sources organized geographically. It also poses an important question of whether these administrative changes had any effect on the cultural character of Hawara.

The reoccupation of the fort in the fourth century CE is the third and final phase of the Roman fort’s occupation. It also represents the second occupation of E121. Unlike much of the *vicus*, E121’s reoccupation during the fourth century CE represents one of the few later *vicus* occupations and is thus important for understanding the character and development of the *vicus* during the Early Byzantine period. The only other known *vicus* structure to come back into use is

---

87 Diocletian’s reorganization is also an interesting topic out of the scope of this thesis. Some noteworthy discussions concerning it can be found in: Graf 1978; Bowersock 1983; Parker 1987, 2006b; and Potter 2004.
the bathhouse after several renovations. This final phase of the Roman fort’s occupation lasted throughout the majority of the fourth century CE, but by the end of the century the fort was entirely abandoned. This abandonment coincides with the abandonment of E121, as suggested by numismatics and ceramics discussed in Chapter 5. Although the reasons leading to the abandonment are unclear, the fort itself went out of official military use. It is possible that these troops actually remained active in the area as later historical documents indicate.

2.3 Topical Literature: Architecture, *Vici* and Civic Relationships

There are several literary topics of interest that need some review. The relationship between Roman forts and *vici* is very important. Locally at Hawara several structures have been excavated from the fort and *vicus* that help explain this concept in a second to third century CE context. Regionally, there are several other fourth century CE forts that have partially excavated *vici* like the fort of el-Lejjun. The el-Lejjun *vicus* excavation, which was conducted by Crawford, is valuable simply because it produced nothing particularly comparable with E121. Thus it is helpful in showing what E121 likely is not. Other fourth century CE forts, like those at Udruh or Sadaqa, also could prove helpful, if their *vici* were understood more clearly. Smaller fourth century CE *quadriburgia*, like that at Quweira, offer some contextual details about frontier architecture, but are not important for interpreting E121. Further forts with partially excavated *vici*, like the Roman fort at Yotvata in Southern Israel, similarly provide contextual details

---

89 Oleson 1990, 298 – 299; Reeves 1996, 53 - 54; Reeves *et al.* (forthcoming). E125 shows evidence of squatter reuse, but it is clear that it functioned in only a semi-permanent capacity (See: Reeves in Oleson *et al.*, 2008).

90 Oleson 2001, 576. There is some historical evidence for this in the *Notitia Dignitatum* which lists a contingent of troops at Hawara during the fifth century CE, see: Seeck 1876, 72. Also see Parker 2006b: 544. The Beersheba Edict also could suggest some military activity at Hawara. See: Di Segni 2004, 141 – 143, 151 – 152.

91 Crawford 1987, 396 – 397; Crawford and Parker 2006, 256 – 257.
especially for comparing specific architectural features, like typical wall constructions. On an even larger scale, vici have been studied in association with forts along the Roman northern frontiers, such as those in Roman Britain and along the Danube. These examples provide some points of comparison especially in regards to the sizes and shapes of vici and their relationship with the military community. Largely, though, these discussions are helpful only as much as they generally discuss vici in the Roman Empire, but are not particularly important for E121 itself.

The literature concerning Roman military architecture outside of forts is also of significance. With E121 outside the fort and near a large flat surface, it could very well have been solely a Roman military construction with little or no civic function. The focused studies of the Roman army provide considerable insight. Webster and LeBohec both point out the common features of military campi, which are helpful for the identification of the Platform. Furthermore, excavations of Roman sites in Britain, particularly that of South Shields excavated in the 1950s, provides some physical comparanda for platforms in a military context. Irby-Massie also highlights examples from the Near East, as well as the pertinent regional epigraphic evidence.

At Hawara, Oleson’s excavations inside the fort have also produced possible comparative evidence for the Platform as solely a military structure.

Beyond architectural comparison, the phasing of the Roman period E125 shrine is also particularly important for understanding the periods of Nabataean cultural expression in the

---

92 In this case, the East building in the el-Lejjun vicus for instance has been plausibly interpreted as a marketplace and administrative building, which distinctly contrasts with E121 and thus removing the likelihood of this interpretation. See: Crawford and Parker 2006, 257.
93 Avner et al. 2003, 411; Oleson et al. 2008, 326.
97 Oleson et al. 2003, 42.
Hawara *vicus*. Reeves has shown that the E125 shrine was in use between the mid second century CE to the late third century CE, which contrasts with E121’s fourth century CE reoccupation.\(^98\) Likewise Bevan and Reeves’ discussion of a Nabataean funerary monument has been associated with the same mid second to third century CE period.\(^99\) Regionally, Bowersock and Patrich have connected similar constructions at Petra with the mentioned Nabataean cultural resurgence during the mid to late second century CE.\(^100\) This local correlation with a regional phenomenon is crucial to a Nabataean interpretation for the Platform during its first phase of occupation in the second to third century CE.

Some discussion of Nabataean culture and society is warranted on account of its importance for interpreting E121. Nabataean urban culture has been discussed at great lengths by an assortment of scholars; surveys of Petra, for instance, have received enormous amounts of attention. Most crucial here are those discussions concerning Nabataean religion and its associated cultic objects. Much of the focused research in this field began during the early 20\(^{th}\) century with surveys of Petra. Published in 1908, Dalman’s survey of altars and cultic niches of Petra has been particularly formative, highlighting the immensity and diversity of the niches and establishing a catalogue and typology for further research. Dalman also contributed many photographs of niches now suffering from decay. Several other scholars followed Dalman, but the work of Starcky stands out. Starcky by 1965 published a further survey of Petra, which contributed greatly by developing much of the terminology used to discuss Nabataean cultic items. Additionally, Starcky focused heavily on Nabataean funerary monuments, which are also discussed in Chapter 4. Bevan and Reeves locally add to Starcky’s discussion by accentuating the Nabataean cultural identity during the Roman occupation, as seen through a funerary monument.

---


\(^{99}\) Bevan and Reeves (forthcoming).
In addition to intensive survey at Petra, several focused studies on Nabataean cultic relationships are useful for interpreting E121. Teixidor (1977), Patrich (1990), Mettinger (1995), Avner (1997), Wenning (1996, 2001), Healey (2001), Netzer (2003), McKenzie (2004) and Tholbecq (2007) all add significant details about Nabataean art, religion and ritual, generally with a focus on cultic objects in Petra and the surrounding region. Specifically, each offers points of interest for interpreting the Platform. Teixidor, Patrich and Mettinger all delve into the identification of cultic objects both as freestanding architecture and relief niches. Avner discusses cultic contexts and the relationship of standing stones to local peaks, important both for the interpretation of the E125 shrine and to explain the possible orientation for the Platform. Tholbecq and Wenning provide a contrasting discussion of cultic platforms and their uses in and out of temples, which McKenzie and Netzer both discuss on a conceptual and theoretical level. Finally, Healey most recently has provided a synthesis of the known material relating to Nabataean religion both archaeologically and epigraphically. Locally, Reeves similarly contributes to the discussion of sacred context and objects in her discussions of the E125 shrine’s godly images and orientation.101

The evidence pertaining to Nabataean and Roman civic interaction is also helped by Reeves’ work on the community shrine. Reeves has shown that the contents of the shrine, a Nabataean betyl and a Roman altar, demonstrate a sense of local concordia between the civilian and military communities.102 Al-Talhi and Al-Daire have also demonstrated community cooperation with a recent inscription from Hegra documenting the military working with a civilian community on construction projects.103 Focused studies of the Roman imperial army,

100 Bowersock 1990, 33; Patrich 1990, 73 – 75.
101 Reeves in Oleson et al. 2008, 314 – 316; Reeves (forthcoming).
102 Oleson et al. 2002, 119 - 121; Reeves (in preparation).
103 Al-Talhi and Al-Daire 2005, 208.
such as that of LeBohec and Campbell, provide considerable further insight into this civic practice broadly with supporting evidence.\(^{104}\) This cooperation is equally important for possible interpretations of the Platform in Phase 1 on account of several structural measurements laid out in Chapter 4.

Although the finds and ceramics of E121 are not as instructive as those from other areas, an acknowledgement of local and regional trends is necessary in order to discuss the ash layer later. Gerber and Shelton have most recently discussed Hawara’s ceramics and shown that although they vary in date, the coarse wares seem to have been produced regionally in Petra and Aila.\(^{105}\) There is currently no known on-site ceramic production. These regionally produced, course ware pieces are coupled with regionally produced and other imported Mediterranean fine wares. E121 broadly followed this trend with regionally produced course wares with other imported fine wares. This trend at Hawara is particularly interesting, however, because it contrasts other Roman sites regionally, which tend to be dominated by locally made coarse ware ceramics.\(^{106}\) For Hawara, its ceramic character is important for understanding the civilian relationship with the military, since both undoubtedly would be using similar regionally produced vessels if there was no on-site production.

Finally, in regards to Structure B and Phase 3, there is a variety of different literature not largely associated with that discussed above or even with the known phasing of the site. The architectural differences in size, construction methods and orientation of Structure B pose a slightly different set of research questions. For these, Oleson’s documentation of structures in modern reuse at Hawara is helpful for offering possible explanations of Structure B’s incomplete

\(^{104}\) Lebohec 1994, 114 - 115; Campbell 1994, 120 - 121.


Additionally, the surveys in the Negev of Roman, Byzantine and Bronze Age tent camps by Rosen and Haiman provide very interesting and different points of comparison helpful for determining possible pastoral functions. Additionally, Saidel’s recent survey of modern tent camp remains in southern Jordan has produced some comparative material for Structure B. Structure B, in many ways, is its own entity and is treated as such. Chapter 5 discusses it at length.

E121 covers the wide spectrum of Roman occupation at Hawara. This brief review has covered the topics pertinent to interpreting E121, but some other, less crucial ideas are suggested within the subsequent chapters. The most important idea to bear in mind is that the relationship between the Roman military garrison, the local civic vicus and the territory they occupied is very complex and can be approached from an array of perspectives.

2.4 Concluding Thoughts

The biggest challenge to interpreting E121 is its lack of well preserved structures with obvious functions. This, naturally, makes reviewing literature for it fractured, requiring a broad base of different sources. Despite heavy robbing and collapse, E121 does provide answers to small questions concerning occupation in Hawara’s vicus. These answers are represented in the above literature, specifically that of Oleson and Reeves. Naturally, field archaeology is also always growing and developing to incorporate more sites and theories. In due time, certainly, more will be available for better understanding E121 in its context. The above overview, however, provides enough insight into the development of scholarship locally and regionally to put E121 into an archaeological and scholarly context.

Chapter 3
The Excavation of E121: Fieldwork Review

This chapter provides an overview of the unpublished excavation of E121 in 1995 and my continued excavation of the area in 2008. This chapter is laid out in two primary sections: the account of the 1995 excavation and the account of the 2008 excavation. Each section explains how the excavation was conducted and what the major results were. These findings constitute the raw data for the analysis in the subsequent chapters. Both seasons provide considerable information and underscore in different ways just how unique E121 is in relation to the rest of the site.

3.1 Account of Excavation - 1995

This account of excavation for 1995 is based on the unpublished notes of Field Director Dennine Dudley and the student excavator Joel Kinzie, as well as Dudley’s section in the 1995 final report presented to the Department of Antiquities in Jordan immediately following the excavation. No discussion of E121 was included in any publication until after the 2008 excavation. As noted, the goals of the Project were largely different during the 1990s and as such the excavators were primarily concerned with interpreting and finding material associated with the site’s hydraulic infrastructure. This intention did not necessarily affect their method of excavation, but it certainly influenced the way they interpreted their material’s relative archaeological value.

As noted in Chapter 1, E121 was chosen for excavation on account of its proximity to a water division tank associated with the site’s aqueduct and because part of a stone structure could

---

110 Oleson et al. 1995b, 44.
111 Reeves et al. (forthcoming). The first part of the E121 section in this publication covers the work done in 1995 and the conclusions they drew.
be seen visibly jutting out from the area’s southern slope. Additionally, Dudley notes that the relative dates of the surface ceramics, being no later than the Byzantine period, suggested a Nabataean period structure. Dudley and Kinzie began the 1995 excavation season by plotting seven 5 m x 5 m squares, of which only four were excavated and none fully. Squares 02 – 04 were set along the southern edge of the area on an east-west axis, with Square 02 being the most western and Square 04 being the most eastern. Square 02 included the shallow slope with the exposed portion of a stone structure, which drew the Project to the area initially.

Square 02 was excavated first between June 24th and July 2nd with a final probe on July 6th. The excavation revealed the most prominent architectural feature of E121: a relatively square, large stone platform extending out from the northeast corner of the square (Fig. 3-1). The Platform, as it was found, had two apparent stone courses: the top course, constructed of flat stone pavers, covered in a hard, white, pebble filled floor plaster and the bottom course, constructed of larger, more irregular stones, mortared together with a grey ashy plaster. The two layers were mortared together with the same ashy mortar. Numerous loose chunks of this same mortar along with a single Late Roman or Early Byzantine coin were found in the soil immediately above the Platform. The details and significance of the Platform are discussed in greater depth in Chapter 4. Immediately west of the Platform, the excavators uncovered Wall 03, a portion of a heavily robbed out north-south wall. At the time, Wall 03 extended into the north baulk of Square 02. In an attempt to date both the collapse of Wall 03 and the Platform probes were done adjacent to both features. The foundation probe of the Platform (Loci 10, 11) revealed the stone foundation and a spectrum of ceramics dating from the Nabataean to Early Byzantine periods. These probes are of interest primarily to Phase 2, as is discussed in Chapter 5.

112 Oleson et al. 1995b, 44.
Similarly, the probe done adjacent to Wall 03 under the presumed wall tumble (Locus 09) also produced Late Roman to Early Byzantine ceramics.

Figure 3-1: The Platform of Square 02

The excavation of Square 02 implied two preliminary conclusions. Firstly, the Platform did not suggest a hydraulic function or a Nabataean period date. Secondly, the ceramics ranged widely from the Nabataean to Byzantine periods. Excavation continued eastward into Squares 03 and 04 towards where the aqueduct was situated. On the surface, large stones were visible in the adjacent Square 03. This excavation revealed that the stones were associated with a highly degraded, curved, north to east two-course stone wall, not attached to the Platform or any other apparent larger structure. This wall was not present in the 2008 season. The wall was constructed of unworked stones and appeared to be part of an undeterminable later construction. Excavation continued eastward in the adjacent Square 04, but only long enough to remove the topsoil and determine that all the visible stones there were floating and not attached to any
structure. This square is not included in the 2008 plan (Plate 2) since it contained no information concerning E121.

After Square 04 was closed, Square 07 was opened immediately north of Square 02. This square was opened to define the northern edge of the Platform as well as determine the structure of Wall 03. Within Square 07 a 5 m x 2 m probe along its southern edge was excavated. A two-course tall, east-west wall, Wall 04, was uncovered in the narrow probe of Square 07. Wall 04 only partially bonds with Wall 03 from Square 02 at Square 07’s southwest baulk (Fig 3-2).

Additionally, as Figure 3-2 shows, Wall 04 was abutted by a truncated piece of wall extending into the southeast from Wall 04’s presumed east edge. This small wall piece seemed to be parallel to Wall 03 and probably once had extended southeast towards the Platform. Wall 04 was built upon a hard packed beaten earth surface, Locus 09. Probes were done through this floor (Loci 13 and 14) and produced Late Roman and Early Byzantine ceramics. At the time, Wall 04 seemed
to run relatively parallel to the suspected northern edge of the Platform. The true orientation of Wall 04 to the Platform, however, was unclear since at this point a 1m wide baulk separated Squares 02 and 07 in which the north edge of the Platform remained. Thus, the final excavation to take place in 1995 of E121 was the collapse of part of this 1 m baulk in order to expose the north edge of the Platform. This action, however, had entirely unforeseen consequences and instead of revealing the hidden northern edge of the Platform, a collection of bronze coins was uncovered between the Platform’s northeast corner and where Wall 04 intersects the baulk.

Across three arbitrary soil loci, thirty-two bronze coins were recovered from the baulk, which separated Squares 02 and 07. Initially the collapse of the entire baulk was going to be considered a single locus (Locus 15) and nothing was going to be saved, but once the coins were found new loci (Loci 16 and 17) were created to more effectively assess their stratigraphic context. Locus 16 was designated for the location of the coins; Locus 17 was for a single coin the excavators believed had fallen from Locus 16. The coins, although by far the most dramatic find for E121, conversely also signaled the end of E121’s excavation during the 1995 season. All of the bronzes uniformly dated to the fourth and early fifth century CE, with the latest being an Arcadius coin (Fig. 3-3). For the 1995 excavators, these coins effectively created a date for the occupation of E121 in the late fourth or early fifth century CE. Additionally, with the foundation probes done adjacent to Wall 04 and the Platform producing largely Early Byzantine results, the excavators moved to close the area. Although the coins do not prove a construction date for any of the architecture, as will be discussed more fully in Chapters 4 and 5, the coins and ceramics were enough information to convince the excavation team in 1995 that the structures in E121

---

113 It was not until the 2008 season that the final orientation of the platform was determined to be different from that of Wall 04. See Chapter 3.
were probably not from the Nabataean period. Thus, excavation of E121 ended with only half of the baulk between Squares 02 and 07 collapsed and a new collection of fourth to fifth century CE bronze coins.

![Figure 3-3: Detail of Arcadius Coin uncovered in 1995 [H95.0391.06]](image)

Dudley and Kinzie concluded their excavation by stating that the function of the Platform and walls was still unclear, but that all were probably constructed in the Late Roman / Early Byzantine period (mid third to later fourth century CE) and were associated with the second occupation of the fort. They did, however, conclude that the Platform’s floor plaster excluded any hydraulic function, as the plaster did not match other examples of hydraulic plaster at the site. This idea, however, was never fully explained. The excavators offered that the Platform possibly
functioned in some utilitarian fashion as “an olive press or something similar.” The lack of supporting evidence does not help this suggestion, but as no other defining feature was uncovered it seemed a fair assessment in 1995. The excavators did also suggest that the continued excavation of Square 07 might help reveal more information about E121. Unfortunately, there was simply not enough contextual evidence to effectively interpret the Platform’s function or the coins’ context. Further excavation at E121 and Hawara overall, however, has changed this.

### 3.2 Account of Excavation - 2008

Thirteen years later, once the Project’s focus had shifted, excavation of E121 was renewed. As previously noted, by the 2008 excavation season the Project’s intent had shifted to trying to confirm and strengthen the evidence for different periods of occupation within the *vicus* of Field E around the Roman fort. E121 was reopened with the goal to define more fully the structures first uncovered in 1995, to confirm the area’s occupational phasing, and to consider how the structures fit into the local context and what they say about the civilian and military relationship. With Reeves directing the Project, excavation of E121 was assigned to the author with the help of volunteer student excavators, along with local Jordanian workers. The volunteer excavators assigned to E121 were Kristin Hadfield, Ryan Shaw, Stephanie Azran and Sherry Hardin, who also served as the Project’s ceramic drawer. The local Jordanians were primarily youths working for the excavation as a summer job. Some had worked on excavations before, including the Humayma Excavation Project, and were well experienced in excavation procedures. Others were less so, but all admirably provided much of the necessary physical labor. The volunteers, while excavating, were also responsible for record keeping, material collection and weekly reports. The author managed and guided excavation in each square, determined the

---

114 Oleson *et al.* 1995b, 44.
direction of the excavation, contextualized the material and produced the area’s final report, submitted to the Department of Antiquities after the field season ended.

The excavation season lasted from May 5th until June 15th, 2008. During this period nine new 6 m x 6 m squares were laid out (Plate 2). These squares were larger than the 1995 squares because the 6 m x 6 m size has become the standard for the Project in the intervening years. The only place where the 2008 excavation area overlapped with the 1995 excavation area was in Square 07 since the northern portion of the square in 1995 was not excavated. The eastern edge of this square was laid out in accordance with the eastern edge determined in the 1995 season, but extended 1 m further north and 1 m further west. It was possible to re-plot the eastern edge of Square 07 accurately because the iron rebar stake placed in the southeast corner of the square was still present from the 1995 season. Square 02, with the Platform, and Square 03 were also re-plotted, but not excavated, just cleared of the accumulated windblown sand. The numbering of new squares excavated in the 2008 season continued numerically from Square 07. Squares 07 – 13 were all excavated as new in 2008.
The 2008 excavation of E121 began with the removal of all the accumulated windblown soil in Square 07’s 2 m x 5 m trench already excavated in 1995. This re-exposed the two course tall Wall 04 running east from where it intersects with Wall 03 at a 38° angle north of east from the southeast corner and resting above the hard-packed beaten earth surface (Locus 09). With the 1995 architecture visible, excavation of the north half of Square 07 commenced. This immediately revealed Wall 802, a three course wide and three to four course tall stone wall running northwest from where it partially bonds with Wall 04 (Fig. 3-4). Wall 802 is a northwest continuation of the small wall fragment extending southeast of Wall 04, initially uncovered in 1995. A full description of the architectural features of Walls 04 and 802 and their significance will be discussed in Chapters 4 and 5. Both sides of Wall 802 were excavated to the same level as Locus 09, the surface uncovered in 1995 adjacent to Wall 04. Wall tumble (Loci 810, 812)
was uncovered primarily on the west side of Wall 802, inside the structure, whereas the fill to the east was composed primarily of smaller stones and a thick firm grey soil layer. Excavation on the west side of Wall 802 revealed Locus 814, a hard-packed beaten earth surface comparable to Locus 09 on the south side of Wall 04. Locus 814 had several oblong and irregular shaped pits dug into it, which will be elaborated upon in Chapter 5. Excavation on the east side of Wall 802, however, did not reveal a floor surface, which suggests that the area east of Wall 802 was outside the structure, whereas the area west of Wall 802 and north of Wall 04 was inside the structure. This theory was later confirmed when the western half of the north baulk of Square 07 was removed to reveal Wall 820, a truncated stone wall running northeast to southwest, opposite Wall 04. These three walls (Wall 04, Wall 802, Wall 820) along with Wall 03 from Square 02 together form what will henceforth be referred to as Structure A.

Later in the season, in order to define Structure A more clearly, as well as the Platform of Square 02, several of Square 07’s baulks were removed. This occurred after the adjacent squares were excavated and did not conclusively define Structure A. As was mentioned above, the western half of the north baulk was removed revealing Wall 820. Similarly, the remaining eastern half of the south baulk was removed to reveal the north edge of the Platform. On account of the coins found in the south baulk in 1995, the excavation of the remaining south baulk was conducted with immense care and all of the removed soil was sifted. Unfortunately, no additional coins were found. Likewise, in order to define the extent of Wall 03 from Square 02 and its connection with Wall 04, the southern portion of Square 07’s west baulk was removed. This revealed a highly degraded extension of Wall 03 from Square 02 running relatively parallel to Wall 802 in Square 07.

Structure A and its details are discussed in Chapters 4 and 5. It is worth mentioning here, however, that Structure A, much like the Platform, has several defining characteristics that help to
narrow its occupational context. Notable among these features are its orientation, construction method and its possible extension to incorporate the Platform. Although form does not predicate function, by highlighting the relationship between Structure A and the Platform, it is possible to assess the phases of E121 more effectively.

Square 10, directly west of Square 07 was opened to see whether Structure A continued westward. An east baulk was not laid-out for Square 10 as that was the most likely place for Structure A to extend. These decisions led to an excavation area of 5.5 m x 5 m. After removing an uppermost soil layer and opening a 1 m x 5 m probe along Square 10’s east edge, it was determined that the walls of Structure A had been robbed out and that it was not worth pursuing the structure to the west. The square was closed upon making this realization. The lack of evidence in Square 10, however, is important. Both Wall 820 and Wall 03 in their respective squares appear as if they would have continued into Square 10, but seem to be cut off at some point in Square 07’s west baulk. This sudden loss of the wall, along a straight line, is probably on account of farming and is discussed more fully in Chapter 5.

Excavation continued northward during the 2008 season with the excavation of Square 08, directly north of Square 07. Square 08 was initially opened to see whether Wall 802 from Square 07 continued northward. Baulks were not included on the eastern and western edges of the square, resulting in an initial excavation area of 6 m x 5 m, which was subsequently focused to a 3 m x 5 m trench on the western half of the square. Although the initial expectation to find the continuation of Wall 802 from Square 07 was proven to be false, several other important features were uncovered. Notably, excavation revealed the beginning of a large, single course stone ring structure, which extends through Squares 08, 09, 12 and likely 13. This architectural feature is Structure B. Beginning with Wall 806 in Square 08, Structure B was initially uncovered in the western half of the square after the removal of the topsoil (Locus 800) as well as
a subsequent layer of soil (Locus 801). The removal of Locus 801 also revealed in the western half of the square a hard packed surface with white nodules embedded within it (Surface 805); this surface, also found throughout Squares 08, 09, 11 and 12, is referred to as the Surface for the remainder of this discussion. Excavation showed, interestingly, that Wall 806 was not constructed immediately on the Surface, but rather on the loose soil above it.

![Figure 3-5: Wall 806 and the cut edge of the Surface](image)

The focus of the excavation in Square 08 remained on defining Structure B as well as the limits of the Surface, which produced interesting results. Notably, the Surface was not uniformly present throughout the probed excavation area of Square 08; rather it seemed to be cut creating a distinct curved eastern edge (Fig. 3-5). This cut is of particular interest because excavations in the adjacent Squares 09, 11, 12 did not produce any similar edge. The value of this edge and the Surface in general, are discussed fully in Chapter 5. Excavation in Square 08 was not limited to these two features. In the northwest corner of the square, excavation also revealed the first evidence of an extensive layer of ash found stretching unbroken through Squares 08, 09, 11 and...
12. This ash layer sat primarily on top of the Surface, staining it a grey-blue color, and was also visible running underneath Structure B in certain places.

While excavation continued in Square 08, Square 09 immediately to the north was opened to try to define the extent of Structure B. A south baulk was not included on Square 09 to avoid losing the small wall. Excavation was initially focused on the southern half of Square 09 with the assumption that such a small wall would not continue too far into the square. This assumption did prove true as Structure B turned abruptly forming a rounded corner (Wall 805) 1.27 m into the square (Fig. 3-6). It appeared that this wall collapsed towards the south and that the majority of the tumble was in the northeast quadrant of Square 08. As it also appeared that Wall 805 would continue through the northeast corner of Square 09, a probe was dug along the northeast edge of Square 08, excavating the baulk and removing part of the tumble. This section of Structure B was similarly one course tall, but with an unclear width, though the tumble into Square 08 seems to indicate that the wall would have been taller or wider when it was in use. This section of wall also rested on loose sand, which was above the aforementioned large ash layer (Loci 803, 806, 807, 812), which was above the Surface (Surface 809).
As excavation progressed through Square 09 and it became apparent that the ash and Surface initially uncovered in Square 08 were also present, it was decided to excavate the remainder of the square to determine their extent. This resulted in the discovery that the ash layer eventually petered out towards the northern baulk, but that the Surface was uniformly present throughout the square. The Surface did appear degraded and pocked with several holes, notably one large hole along the northern baulk (Fig. 3-6). The Surface did not, however, appear cut as it was in Square 08. The evidence concerning the ash layer also suggested that although it did seem to become less concentrated in the northern half of Square 09, it did continue further east and west as it appeared in both baulks. After exposing the Surface and defining its pockets, Square 09 was closed.

Squares 11 and 12 were opened adjacent to the west and east sides of Square 08. The two squares were excavated in search of two elements. First, Square 11, west of Square 08, north of Square 10, was opened to look for the continuation of the Surface and for any continuation of
Structures A and B. After the removal of the topsoil (Locus 800), which contained many large stones, it became evident that no architecture would be found in Square 11. Excavation did reveal the continuation of the Surface (Surface 803), but it was not as uniformly present as it was in Square 09. It did appear to end abruptly towards the south end of the square, which might be an indication of cutting, as in Square 08, and was patchier in the northern half of Square 11. A continuation of the extensive ash layer (Locus 802) was also uncovered in the northeast corner and again rested on the Surface. This ash, however, was limited to the northeast corner of Square 11. In an attempt to formulate a conclusive date for Surface 803, two 5 m x 1 m probes were opened along the north and south baulks of Square 11. These probes were excavated to the sterile soil layer. The two probes are discussed along with the Surface in Chapter 5. After these probes were completed, Square 11 was closed.

Figure 3-7: Structure B

Square 12, adjacent to the east of Square 08, was the final square extensively excavated. It was opened to follow Structure B eastward. North and south baulks were not included in Square 12 to ensure again that nothing would be missed. This decision resulted in an excavation
area of 5 m x 6 m. After the removal of topsoil (Locus 800), the continuation of Structure B became evident and was labeled locally as Wall 801. Wall 801, however, appeared to turn southward 0.70 m from the east baulk. There was a break in the wall, so the southern portion was labeled as Wall 802. Walls 801 and 802 in Square 12, along with Wall 805 in Square 09 and Wall 806 in Square 08, form the entirety of Structure B (Fig 3-8). The details of Structure B are also outlined and discussed in Chapter 4. Excavation in Square 12 continued, however, on the outer rim of Walls 801 and 802 to search for the Surface and ash deposit found in Squares 08, 09 and 11. Both of these features were uncovered, with the ash again resting upon the Surface. This part of the Surface was in good condition and had an interesting inclusion: a narrow, shallow trench extending out from the north baulk continuing beneath Wall 801. This feature, which could be interpreted as the depression of a no longer extant pipeline, is discussed in Chapter 5.

It was eventually decided during the last days of the season to open one final square immediately south of Square 12 and east of Square 07 to see if Structure B continued southward from Square 12. Square 13 and was laid out exactly like Square 12 without north and south baulks, creating a 5 m x 6 m excavation area. Due to time constraints, only the northern 2 m of Square 13 were excavated, with only the topsoil (Locus 800) being removed in the eastern portion of the trench and one additional layer (Locus 801) in the western portion. Square 13 revealed that although traces of a wall could be seen, Structure B had deteriorated into rubble. This was the final piece of excavation completed during the 2008 season on E121.

3.3 Concluding Remarks

To summarize, the six weeks of excavation conducted during the 2008 season revealed five major elements, which are explored in greater depth throughout the remainder of this thesis. These elements are: the Platform, Structure A, Structure B, the extensive ash layer and the hard-packed Surface on which the ash rests. This completes the overview of what was excavated in
E121. Although this is a condensed account of what occurred during the excavation seasons, this account does reference all the details crucial to determining the phasing and functions of E121. One consideration that should be maintained is that with the 1995 and the 2008 seasons together, over twenty people helped in the excavation of E121. The work of all of these participants has been invaluable to the collection of data and progression of the research.
Chapter 4

Phase 1: Pre-Fourth Century CE Occupation

The first phase of E121 falls before the late fourth century CE, probably between the mid-second century CE to the third century CE during the first occupation of the Roman garrison. The goal of this chapter is to look into the evidence supporting this assertion and to put that evidence into its local archaeological and larger historical context. Two features of E121 are argued to date to Phase 1: the Platform of Square 02, originally uncovered in 1995, and the north corner of Structure A straddling Squares 07 and 08. These features are structurally distinct from the rest of the field’s architecture. Dating Phase 1 to the first occupation of the Roman fort contrasts with the 1995 suggestion that the Platform and what was then known of Structure A should be associated with the later fourth century CE occupation. Although the 1995 assertion remains partially true, the present examination into the ceramics, mortars, construction methods and relative cultural significance shows an earlier date for Phase 1. The dating of this phase can be understood by examining a variety of sources, most importantly the local and regional comparanda. In 1995 much of this information was not yet available, making the fourth century CE suggestion the most obvious and prudent answer. The architectural descriptions below are based on the notes from the 1995 and 2008 excavation seasons. Additionally, the associated ceramic and small finds data come from the excavation records of these two seasons. In order to facilitate points of comparison, this chapter begins with complete descriptions of the architecture. The descriptions are followed by a review of the material for dating Phase 1 and then a discussion of the structures’ possible functions.

115 Dudley in Oleson et al. 1995b, 44.
4.1 The Platform in Phase 1: A Complete Physical Description

The Platform is a relatively square stone structure with two apparent courses: a larger, cobble and boulder lower course and a smaller, flat, upper course creating a stepped appearance (Fig. 4-1). Its total preserved height is 0.57 m. The larger lower course of the Platform measures on its north and east edges at 2.95 m and on its south and west edges at 2.62 m. These measurements create a slightly skewed quadrilateral, which extends further out at its northeast corner. It seems likely that the Platform was closer to a true square when it was constructed and has simply fallen into disrepair due to reuse and partial exposure on the area’s southern slope. The upper course, in contrast, is only 1.76 m long on its south and east edges and 1.62 m long on

---

Figure 4-1: The Platform of Square 02

The Platform is a relatively square stone structure with two apparent courses: a larger, cobble and boulder lower course and a smaller, flat, upper course creating a stepped appearance (Fig. 4-1). Its total preserved height is 0.57 m. The larger lower course of the Platform measures on its north and east edges at 2.95 m and on its south and west edges at 2.62 m. These measurements create a slightly skewed quadrilateral, which extends further out at its northeast corner. It seems likely that the Platform was closer to a true square when it was constructed and has simply fallen into disrepair due to reuse and partial exposure on the area’s southern slope. The upper course, in contrast, is only 1.76 m long on its south and east edges and 1.62 m long on

---

116 This description is based on my observations during the 2008 excavation season, in combination with the information contained in the 1995 field notes and final report given to the Department of Antiquities of
its north and west edges. These dimensions form a second slightly obtuse trapezoid, which is missing part of its northwest corner.

The visible edges of the lower course are made up of large, irregularly shaped stones. The largest of the stones are placed around the corners and along the edges of the Platform with the exception of the southeast corner. This corner is formed with smaller cobbles and is held together with a large amount of grey packing mortar. Similar smaller cobbles seem to have been used for the inner body of the Platform, though only a probe through the structure could confirm the speculation. The construction technique is similar, though not identical, to many Roman period stone walls at Hawara, which employ large face stones, but have rubble cores. Most of the stones here are uncut local sandstone including the white, red and purple varieties.

This lower course is now set fairly deep into the soil. Foundation probes were dug on the south and east edges of the Platform, revealing that its pebble and small cobble foundation ends about 0.47 m from the top of the lower course. It is possible that the foundation might be different along the other edges of the platform, but it seems unlikely. The lower course itself is built on apparently sterile orange sandy soil, a natural layer often seen beneath the occupation layers throughout many parts of the site.

The cobbles and larger stones of the lower course are affixed together with a pale to dark grey packing mortar. This mortar appears throughout the all visible areas of the lower course of the Platform, including between the stones and also on top of parts of the lower course. Whether this suggests that the upper course, at one point, extended to the edges of the lower course is addressed below. There were some notable concentrations of the grey mortar on top of the lower

---

Jordan (Oleson et al. 1995b). Unfortunately, E121 was not discussed in Oleson et al. (1999), which was the published preliminary report for the 1995, 1996, and 1998 seasons.

course that may indicate some reuse. Most significant among these was along the northern edge of the Platform where a very large concentration of the mortar seemed to be spilling over the edge and clumping together (Locus 802). This collection of mortar was uncovered in the 2008 season. Similarly, along the eastern edge of the Platform, which was also uncovered in the 2008 season, there was another large concentration of the mortar holding together primarily smaller cobbles. One odd feature, however, distinguishes it: two parallel lines of mortar, one at the southern portion along the east edge of the Platform and the other several centimeters inside (Plate 2). It appears as if a stone, or possibly wood, had once been affixed there. These details are explored below in the section on the Platform’s function and purpose.

Figure 4-2: The Platform – North Edges

118 Oleson 1990, 304.
The upper course of the Platform is far smaller than the lower course in almost every respect. Its dimensions, as stated above, are about a meter shorter on its north-south and east-west axes. It is situated 0.42 m from both the north and east edge of the lower course, 0.62 m from the south edge and 0.52 m from the west edge (Fig. 4-2). This upper course’s maximum possible length, as it remains, is 1.76 m on its north-south and east-west axes. This course appears to have been a finishing layer for the Platform. It is constructed with flat, irregular paving stones. On account of the thinness of the stones, the upper course is raised only about 10 cm from the top of the lower course. The stones, like those beneath it, are local and not cut into particular shapes, though their faces were flattened and smoothed. Most appear to be large in comparison to the lower course, though smaller flat cobbles do fill in the gaps left by the irregular large stones. All of the stones seem to be mortared to the lower course with the same pale grey mortar.

Much like the lower course, there are a few unique details, which characterize the upper course as being a finishing layer. Firstly, the upper course has a distinctly different plaster used on its face. This very hard, pebble-filled, white plaster appears patchy, but evidently covered the entire top course at one point. The largest patch lies along the eastern edge of the upper course and is a few centimeters thick. Although it does not have a smooth upper face like other floor plasters found throughout the site, it is clear that the material affixed to the top of the Platform was not a packing mortar, like that found on the lower course. This plaster is discussed below in the section on the dating of Phase 1.

A second unique feature that helps distinguish the Platform is a peculiar raised stone along the eastern edge of the upper course (See: Fig. 4-2). This narrow, but relatively long (0.42 m) stone is important because it could suggest that the upper course of the Platform did not actually cover the entire lower course when it was in use, but rather was contained by a low
raised rim of similar stones. Such a construction could be supported by the fact that the stone itself did not seem to have been built upon. Maybe even more importantly, the plaster remaining on the upper course rests immediately adjacent to the west of this raised stone and does not continue on the opposite side. Although an interesting prospect, it is speculative whether a rim continued around the Platform’s upper surface or perimeter.

One final note concerning the orientation of the Platform is warranted. As has been mentioned above, it is important to observe that the Platform’s orientation is largely different from most of Structure A, with the exception of Wall 820, and entirely different from Structure B. This is particularly clear on the top plan showing the Platform and Structure A’s Wall 04, the wall immediately north of the Platform (Plate 2). As has been indicated, it seems likely that most of Structure A dates to a later period. Wall 820, however, seems to have some relationship with the Platform in Phase 1. The reuse of the Platform during Phase 2 in correlation with Structure A is discussed in Chapter 5.

4.2 Early Associates: Structure A in Phase 1

There are certain physical elements that distinguish the earliest parts of Structure A from its later renovations. This analysis is largely dependent upon construction technique, which stands out as being characteristically different from the rest of Structure A, and which also relates it to the Platform. The primary features in question are the bonded corner of Wall 802 and 820 straddling Squares 07 and 08 and the relative orientation of Wall 820 to its opposite Wall 04 and to the north edge of the Platform (Fig. 4-3).
Figure 4-3: Structure A's bonded north corner

The size and shape of the bonded corner of Wall 802 and 820 are straightforward. This corner is of interest because it is distinctly the best-constructed architectural feature of Structure A. Walls 802 and 820 bond with two large sandstone blocks on top of each other as an alternating header and stretcher. One block with distinct Nabataean trimming, whose stretcher side faces north, partially forms the bottom course and outer face of Wall 820, and is 0.52 m long, 0.24 m tall and 0.28 m thick. The other block, whose stretcher side faces east, partially forms the second course and outer face of Wall 802 and is 0.78 m long, 0.18 m tall, c.0.25 m thick, but does not have any trimming. Immediately below this stone is another large sandstone block completing the eastern side of the corner. This corner is excellently constructed and is a surprising addition in Structure A. The uniqueness of its construction is particularly clear when one takes into consideration the abutting, or only partially bonded, corner between Wall 802 and
Wall 04. This southern corner is far more poorly crafted than the northern corner. The stones used there are irregular in shape and heavy mud packing with cobbles and pebbles was required to fill the gaps. This construction technique stands out as different from the northern corner’s minimal mud packing.

Additionally, Walls 802 and 820 differ considerably in composition. Although the two stone blocks bonding the walls are large, as are several of the adjacent blocks, the majority of the stones making up Wall 802’s foundation are irregularly shaped and haphazardly put together with mud packing; a building technique replicated in Wall 04. The stones of Wall 820, with the exception of the upper third course, are blocks and stacked atop one another with minimal mud packing between them. This masonry sets it apart from the other walls of Structure A. Again this distinct difference might suggest a different construction date.

There are also several significant angles related to Structure A, especially in association with the Platform, that could help identify different construction phases. Wall 820 running at 16.7° north of east is not closely parallel with its opposite Wall 04, which runs at 38.9° north of east. It is, however, very near to parallel with the south edge of the Platform at 18.4° north of east. This angle is very similar with the orientation of the Nabataean and Roman structures of the bathhouse area, E077, whose most northern wall is 17.1° north of east (Plate 3). The north/south angles associated with Wall 802 and the east edge of the Platform present one other point of concern. Specifically, the outer face of Wall 802 bends. Near the bonded northern corner of Wall 802 and 820, Wall 802 is about 20 - 23° west of north, whereas near the southern corner it is closer to a 35° angle west of north. It is possible that this curve is the result of earthquake damage, but with the distinct change in construction methods and materials, it seems more likely

---

119 See Chapter 5.
to be intentional. The east edge of the Platform is similar to the northern section of Wall 802 at an 18.5˚ angle west of north. E077 again provides an interesting comparison since its westernmost wall of the bathhouse is 17.5˚ west of north, but its eastern wall is 15.5˚ west of north. The significance of this similar orientation with E077 is addressed below in regards to dating.

Differences in construction methods and orientation suggest that two different construction phases are observable in Structure A. Wall 820 and its corner are built primarily of ashlar blocks with at least two courses. Walls 802 and 04 also have ashlar blocks, but they are smaller and make up only the lowest foundation course. Wall 802 also distinctly decreases in quality between its northern and southern corner, requiring heavy mud plaster and cobbles. These discrepancies are only heightened by Wall 802’s distinct curve and shift out of alignment with Wall 820. These disparate features present in the same structure seem to indicate at least two occupational phases, suggesting that a structure was present before the apparent Phase 2 structure. If this were the case, the Phase 1 structure would have to have been deconstructed or destroyed partially and reconstructed in Phase 2 with poorer materials and on a slightly new alignment.

There were major renovations to the fort during its second occupation in the fourth century CE, which, as the reuse of a second or third century CE nefesh inscription highlights, involved the robbing of extant structures outside the fort for their materials.121 With E121 so close to the fort, it seems likely that if it contained quality stones, they would have been used. Such a situation could explain why the north corner’s orientation and construction are so different from the rest of Structure A.

120 See Chapter 5.
121 Bevan and Reeves (forthcoming); Oleson et al. 2008, 318 -321.
This suggested early phase for Structure A is dependent on the Platform’s phasing and orientation. The similar angles between Wall 820, the Platform and Nabataean and Roman structures of E077 are very interesting and could suggest some contemporaneous occupation. This thought is, of course, very preliminary, but is certainly worth investigating further. It does seem likely that Structure A and the Platform were occupied contemporaneously, since they are immediately adjacent to one another. Although some structural elements can help date Structure A, its suggested Phase 1 occupation is largely dependent upon dating the Platform effectively.

4.3 Dating the Platform to Phase 1: Size, Construction and Finds

One of the simplest and most interesting approaches to dating a structure at Hawara is to apply some standard Roman measurements in order to see whether it might conform to Roman construction ideals. One Roman foot (RF), the *pes monetalis*, is 0.296 m long.\(^\text{122}\) The north and east outermost edges of the Platform are each 2.95 m long. This measurement indicates that the lengths are almost exactly 10 RF. The south and west outermost edges of the Platform are 2.62 m long, about 8.85 RF. The north and east sides of the Platform are the better preserved of the four sides, which means they are likely closer to the maximum possible length for all the sides, when the Platform was fully preserved. Any structure being almost exactly 10 RF x 10 RF is very helpful for dating. The measurement is highly indicative of Roman involvement as well as a Roman period construction date at Hawara, which would confirm its date between the second and fourth centuries CE.\(^\text{123}\)

It should be noted here that the Roman foot was used in the Nabataean kingdom prior to its annexation by the Romans. This can be seen most clearly at the Petra Pool Complex, which

\(^{122}\) Oleson *et al.* 2008, 320; Oleson (submitted), Ch. 7; also see: Kanellopoulos 2003, 149.
\(^{123}\) (J.P. Oleson, personal communication, 2009).
has a pre-Roman phase and used the Roman foot for its construction.\textsuperscript{124} Regionally, this does seem to indicate that the use of the Roman foot cannot be used as representative of construction period. This, however, is not the case for Hawara. Oleson has done extensive investigation into the measurements of the site that suggests that the Roman foot likely only came into use after the arrival of the Roman garrison.\textsuperscript{125} The Roman foot does not seem to have been used on any of the Nabataean period infrastructure, like the adjacent Nabataean reservoir (no. 63). Additionally, according to Reeves, the Roman foot does not appear to have been used in the Nabataean phase of the E125 shrine area.\textsuperscript{126} This building measurement contrasts with the Roman fort where the Roman foot is used throughout. Thus, it is fair to assert that the Roman foot is indicative of construction after the arrival of the garrison.

The Roman measurement is the clearest and most significant piece of evidence for broadly confirming the suggested second to fourth century CE date for the Phase 1 construction in E121. This date, however, can be narrowed when one takes into consideration the development trends of Hawara, and reuse of the Platform. Excavation has shown most Roman construction in the \textit{vicus} occurred primarily between the late second and third century CE. The phasing of E122, E125 and E128 is particularly telling since they are out of use by the fourth century CE, but show new construction during the second to third centuries CE.\textsuperscript{127} This \textit{vicus} abandonment at the end of the third century CE is thought to coincide with the first abandonment of the fort, sometimes associated with the Zenobia uprising.\textsuperscript{128} This contextual evidence is

\begin{itemize}
\item \textsuperscript{124} Kanellopoulos 2003, 155 – 156.
\item \textsuperscript{125} Oleson (submitted), Ch. 7.
\item \textsuperscript{126} (M.B. Reeves, personal communication, 2009).
\item \textsuperscript{128} See Chapter 2.
\end{itemize}
crucial because the Platform is in obvious reuse during the fourth century CE during Phase 2.\textsuperscript{129} If it is in reuse it must have been built prior to that period and since most \textit{vicus} construction was happening during the mid second to third century CE, it seems the most appropriate period for the Platform’s construction.

While the architecture and stratigraphy of E121 are the best sources for relative dating at E121, it is necessary to examine the ceramic sherds and other small finds to narrow that date. Unfortunately, on account of later occupation there are few pieces of evidence indicative of Phase 1. Although the ceramic sherds collected around the Platform did contain some earlier Phase 1 sherds, they also contained Phase 2 sherds, indicating the subsequent reuse of the area.\textsuperscript{130} Even the sherds from the foundation probe done adjacent to the east edge of the Platform (Locus 10) contained Phase 1 and Phase 2 sherds.\textsuperscript{131} Moreover, there were no true closed loci for either Phase 1 or Phase 2. It is clear, however, that the dates ranged solely between the second to fifth century CE. These dates further confirm the relative range of occupation contemporary with Roman occupations. Additionally, it is not indicative of any Nabataean period occupation. The currently available ceramics information simply does not offer a conclusive Phase 1 date. Thus, it is necessary to look to other possible indicators of chronology.

\textsuperscript{129} See Chapter 5.
\textsuperscript{130} It should be noted that the 2008 ceramics were analyzed and dated by our ceramicist Andi Shelton. Locus numbers beginning with ‘8’ designate these sherds. The ceramics from the 1995 season, however, only had preliminary readings done by Khairieh ‘Amr during the season and further readings by Oleson and Schick in 1998. Shelton performed further analysis on several loci during 2009, but she did not change any of the preliminary readings.
\textsuperscript{131} This locus, although a foundation probe, is actually more interesting in regards to the Phase 2 occupation and reuse of the Platform. See Chapter 5.
As mentioned in the description of the Platform, two manufactured construction materials (MCM) were found attached to its surface (Fig. 4-4). At E121, these two were the only MCM found in situ. This detail in itself is important because it highlights just how different the construction of the Platform is from Structure B and most of Structure A, which were built with either dry masonry or mud packing. The two crucial materials are, of course, the grey packing mortar used between the upper and lower layer of the Platform, and the hard, white, heavily tempered, pebbly, floor plaster found on top of the Platform. Due to the extensive research conducted for the survey of the Hawara hydraulic system, the mortars of the area are well known. Although “it is still not possible to use the analysis of plaster and mortar alone as the basis for dating the structures in which they occur,” trends within mortar production in combination with other dating techniques can help in identifying overall period and function. No chemical or structural tests have been conducted on the E121 MCM, so this discussion will be limited to the
important features Oleson has laid out in his detailed study of the Humayma MCM: hardness, fineness, weight, color, type of micro-aggregate and pozzolanic additives or crushed terracotta.133

The grey packing mortar found on and around the Platform is of paramount importance for the dating of E121. It is hard, but crumbly when broken and light ashy grey in color with occasional sandy patches. The mortar has several small flecks of carbon throughout, measuring less than 1 mm in diameter, and also a few scattered white nodules, likely lime, measuring up to 1 cm in diameter. The mortar completely lacks any crushed terracotta or ceramic inclusions. There were no flat surfaces in the samples taken, but the imprints of smaller stones were clear. This description is based on examples taken from Locus 802, a large concentration of the mortar attached to the north edge of the Platform. Oleson suggests that the grey color is a result of ash deposited by the fire in the limekilns used when making the mortars.134 The amount of ash tends to have an inverse relationship with the hardness and quality of the mortar. Thus with this ash being light in color, it is not surprising that the mortar is rather hard. What is odd is that the mortar is not particularly well mixed, as evidenced by the clumps of lime, small flecks of carbon and streaks of sand. The contrasting levels of additives give some indication that the quality of workmanship was decent, but certainly not as careful and attentive as it could have been.

Grey mortar was common at Hawara throughout most of its history and has been uncovered extensively from several locations around the site, notably many of the first century BCE – first century CE Nabataean cisterns (no. 54, 63, 64, 68), the second century CE Roman fort (E116) both in its buildings and reservoir, the bathhouse structure of E077 and the Late

---

132 Oleson (submitted), Ch. 6.
133 Oleson (submitted), Ch. 6.
134 Oleson (submitted), Ch. 6.
Byzantine or Early Islamic cisterns (no. 72, 76).\textsuperscript{135} Moreover, this type of mortar was also used extensively throughout the region.\textsuperscript{136} This temporal spectrum of use, of course, does not help narrow the date of the Platform or Phase 1. On the other hand, not all of these mortars have the same qualities, and it has been suggested that the mortars made during the Nabataean period (first century BCE – first century CE) were of finer quality than those created in subsequent periods.\textsuperscript{137} As it contains many large additives and signs of poor slaking, the mediocre quality of E121’s mortar tentatively supports the evidence provided by the ceramics that the Platform does not date to Hawara’s Nabataean period (first century BCE – first century CE).

Although E121’s white floor plaster offers additional evidence, it has less dating value than the mortar. The plaster itself is a crumbly hard white floor plaster with small lime nodules, many small pebbles and small carbon flecks throughout. The collected samples had two coarse bumpy faces. The plaster still adhering to the Platform did have an upper flat face, which was not smoothed or polished like some plasters found throughout the site. It is possible that while the Platform was in use there was a second layer of plaster above this coarse layer, which could have been smoothed and flattened further. The pebble inclusions in the samples averaged around 3 mm in diameter, though larger pebbles were apparent in some of the uncollected plaster still attached to the Platform.

There are only a few places on the site that use both white floor plaster and grey mortar packing on the same structure. The best example is the bathhouse of E077. The bathhouse went

\textsuperscript{135} Humayma Excavation Project Register.

\textsuperscript{136} The sites where this grey mortars have been documented are numerous. Some notable scholars have used mortar for dating purposes, including Negev (1988) in his discussion of the architecture of Mampsis, and Bedal (2003) in regards to her excavation at the Petra Pool-Complex. Negev asserts that the grey mortar originates from the Nabataean period, but his study is dated. Bedal, on the other hand, was able to date the ceramics embedded in her grey mortar giving a Nabataean date. E121, unfortunately, lacked datable ceramic inclusions.
through several major renovations during its occupation. The one that is of particular interest is that which occurred during the Late Roman period (third century CE) known as Phase 1. During Phase 1, Room B, the apodyterium, or changing room, was constructed with a similar combination of white plaster and grey packing mortar. Specifically “the [white] plaster of the floor was laid on a bedding of irregular rubble set in a crumbly grey mortar containing numerous flecks of ash.”

Similarly, the benches of this room were covered in this same white plaster. Although, as stated above, it is hard to discern a date from mortar, it is clear that the E121 Platform’s construction technique is identifiable with Roman period structures.

In sum, the physical evidence could suggest a Phase 1 occupation between the second to third centuries CE. The obvious involvement of Romans in the Platform’s construction coupled with its clear reuse in the fourth century CE alone suggests this date range. The development of the Roman vicius during the late second to third century CE, as seen in E077, E122 and E125 further highlights the likelihood of the Platform and Structure A originating during this period. Although the ceramics do not help as much as in other areas, the mortar is a compelling addition to dating the Platform’s construction.

4.3.1 Structure A in Phase 1

Although the Platform provides the most significant evidence for Phase 1 occupation, there are a few features of Structure A that also suggest construction during this period. The reuse of Nabataean ashlar blocks in the north corner of Structure A and its style of construction both indicate the reuse of building materials during the Roman period. Additionally, Structure A likely shared a relationship with the Platform. When Structure A came into use and, even more

---

137 Oleson (submitted), Ch. 6. Quality is based on several factors, notably, the presence of clumpy additives or unmixed lime and the amount of carbon.
138 Oleson 1990, 298.
so, what it functioned as is undeterminable. The shared orientation with the Platform could indicate contemporaneous occupation. Nevertheless, without a sense of Structure A’s construction date, its abandonment date and later reconstruction date sometime during the fourth century CE, independently calculated from the Platform, it is necessary to rely on the same local trends outlined above. Even with this, however, little can be asserted about Structure A in Phase 1 except that it likely existed.

As indicated, however, the evidence suggests a construction, abandonment and later reconstruction phase. Moreover, the quality of the stonework and construction for the bonded corner of Structure A, does suggest professional involvement. It also shows that the structure was of some importance since contemporary construction in many of the vici’s Roman occupation structures like E125 consisted of pisé or heavily mortarred rubble walls during this period.\textsuperscript{139} Additionally, Structure A’s northern section also has stone faces with rubble cores that match much of the construction in the Roman fort, like the latrines of Area N.\textsuperscript{140} Structure A does seem to correspond effectively with the understood chronology of the site based on the Roman occupation. Finally, the shared orientation of the Platform, Wall 802 and apparently the structures of E077 indicate that the orientation is worth researching further and could help identify a settlement pattern.

It is possible that Structure A did not share any function with the Platform during Phase 1, although it seems unlikely since they are right next to each other and isolated from the rest of the site. Even though little can be asserted confidently about this phase of Structure A, it will remain an important example to consider for further research at the site and could help illuminate a variety of more interesting topics touched on here. Structure A, however, is less informative

\textsuperscript{139} Oleson et al. 2008, 314 - 318; Oleson et al. 2003, 47 – 50; Reeves et al. (forthcoming).
than the Platform, a far more complicated structure which lends itself extraordinarily well to interpretation.

4.4 Phase 1 and Platforms: Functions, Orientations and Cultural Context

As for the Platform, what was it used for and from which culture did it originate? These are two crucial questions, which have not yet been addressed. Although Roman involvement in its construction seems clear on account of the use of the Roman foot, it still remains unclear whether the Platform functioned as a military or civic structure. Platforms in context, broadly, are the focus of this section, starting first with those of Hawara and expanding regionally. Naturally, platforms are common and fall into a wide spectrum of possible uses, but it is important to consider that this Platform was built for some reason. To understand that reason it is necessary to look at other platforms and their uses in the Nabataean world and the Roman Near East.

4.4.1 Roman Military Functions: Tribunals, Altars and Statue Bases

With the Platform constructed with military measurements and Roman military culture dominating for almost 300 years locally, a Roman military function is likely and provides a good starting point. The simplest interpretation of the Platform in this Roman context might be that it was a raised tribunal, a common feature of Roman military camps and forts. A tribunal is simply any raised platform on which a military official can stand to address a large group of soldiers. A possible tribunal (0.94 x 2.75 x 0.73 m high) already exists in the fort’s Principia adjacent to the structure’s west wall.\textsuperscript{141}

\textsuperscript{140} Oleson \textit{et al.} 2008, 326 - 327.
\textsuperscript{141} Oleson \textit{et al.} 2003, 42.
Tribunals are present both inside and outside forts. Those in a Roman military context were used for addressing troops likely doing parades or drills outside the fort. The parade ground, or *campus*, is a common feature outside forts.\(^\text{142}\) There is no reason to believe Hawara did not have one since the area was important militarily in the second to third centuries CE and had such a long occupational history. Archaeologically, a *campus* is simply a flat, hard plane. The thick, hard surfaces present in E129 and E130 have been hypothesized to be part of the *campus* at Hawara.\(^\text{143}\) The extensive hard packed Surface at E121 is nearly identical to the surfaces found in E130 and E129 further north and could indicate that such a surface is also present in the space between these areas. If this were the case, the large flat area created would be ideal for a *campus*. It is worth considering, however, that the presence of the *campus* does not necessarily predicate that the Platform is a tribunal. Several small details could suggest otherwise. For instance, the Platform is not actually situated on the E121 Surface, nor is the Surface itself very thick at E121, possibly making it less ideal for a military drills and parades.\(^\text{144}\) Additionally, it is unclear if there was a tradition of where a tribunal would be built in the *campus*. At Lambaesis in North Africa it seems that the tribunal was in the center of the *campus*, but at South Shields in Northern Britain the tribunal was on the edge.\(^\text{145}\)

On the other hand, there are also several features that make the interpretation appealing. For instance, the presence of Structure A could support the interpretation, since other platforms or even small temples are sometimes built in tandem with tribunals.\(^\text{146}\) Additionally, as Irby-Massie points out, these temples were sometimes built for the dedication of a *campus*, as an inscription at

\(^{143}\) Reeves et al. (forthcoming).
\(^{144}\) Irby-Massie (1996) suggests, however, that diverse terrain is good for training.
\(^{146}\) Irby-Massie 1996, 295.
Dura Europas suggests.\textsuperscript{147} Although there is not enough of Structure A left to suggest it was a temple, it is important to note that the presence of additional structures conforms to the context of other known tribunals.\textsuperscript{148} Webster and Irby-Massie also both highlight the well known tribunals from Roman Britain, specifically those from South Shields, where three second century CE cobble stone platforms were found, one still standing to a meter tall.\textsuperscript{149} It may or may not be significant, but E121’s Platform is not nearly that tall. Considering the very particular function of a tribunal, the low height of the Platform could be problematic. Even the possible tribunal in the fort is taller than the Platform by almost a quarter of a meter.

The tribunal interpretation of the Platform is highly plausible though and is certainly a straightforward answer considering that the Platform is 10 RF wide, very close to the fort and its west gate and likely somewhere near the \textit{campus}. Regardless, more evidence concerning the surrounding areas, especially the Surface is needed to investigate this theory further. For the present study, however, understanding the Platform as a tribunal could help explain the area separating E121 and E129 and E130 as well as the Surface.

Tribunals, however, are not the only structures in or adjacent to \textit{campi}. As stated above, sometimes temples accompany them and also, maybe more appropriately, altars. The altars found in other \textit{campi} tend to be dedicated to the \textit{Campestres} or specific military deities like Mars, Hercules, or Jupiter Optimus Maximus.\textsuperscript{150} The relationship between platforms and altars is self-evident, but worth mentioning, since most altars are platforms in some capacity but clearly not all platforms are altars. Although some altars have been uncovered at Hawara, none are particularly

\textsuperscript{147} Irby-Massie 1996, 295; cf. \textit{AE} 1931, 113.
\textsuperscript{148} These are not the only known tribunals and \textit{campi} in the Roman Near East. For instance, there is epigraphic evidence to suggest that Palmyra actually had more than one campus with a tribunal in it and in Cilicia the legion flattened a hill to make space for their campus. See: \textit{AE} 1931, no. 113; cf. LeBohec 1994, 114 – 115.
\textsuperscript{149} Thornborrow 1959, 8 – 25.
comparable with the Platform. The majority of those found at Hawara have been unearthed in known religious structures, like the E125 shrine and the *Principia*.\(^{151}\) Moreover, most dedicatory altars, both at Hawara and in *campi*, are solid stone inscribed blocks, unlike E121’s built Platform.\(^{152}\) These contrasting construction techniques suggest that it is unlikely that the Platform functioned in a dedicatory capacity as an altar. Nevertheless, the possibility that it formed the base of a built altar is still reasonable.

In association with this idea, it is worth mentioning that tribunals have sometimes been dedicated as commemorative monuments. Although there are limited examples, it is clear that after Hadrian spoke in the *campus* at Lambaesis, its tribunal became a dedicatory monument.\(^{153}\) It is highly unlikely that this is the case for the Platform, but it is certainly an interesting example of how important tribunals (and the emperor’s presence) could be perceived. It is certainly possible that the Platform may have functioned in some dedicatory capacity as simply a built structure even if it were not an altar.

Another possibility is that the Platform functioned as a Roman military statue base. Several other statue bases exist at the site; the most obvious of these are the small (about 0.90 x 0.76 x 0.46 m high) bases on the south wall of the fort’s *Principia*.\(^{154}\) These bases were formed of reused Nabataean ashlar blocks and were at least partially plastered when they were excavated.\(^{155}\) Although this construction technique remains similar to the E121 Platform, these

---

\(^{150}\) Irby-Massie 1996, 295.
\(^{152}\) For those altars found at Hawara see Oleson *et al.* 2002, Tafel III – IV.
\(^{154}\) Oleson *et al.* 1999, 417; 2003, 41.
\(^{155}\) Oleson *et al.* 2003, 41.
bases are significantly smaller and abut the south wall of the *Principia*.\textsuperscript{156} A Latin inscription attached to one helped to identify their function as statue bases (Fig 4-5).\textsuperscript{157}

![Figure 4-5: Statue Base from the Principia (Oleson)](image)

Although the Platform is not comparable with the statue bases in the fort, there are several contextual reasons that could support the interpretation. For instance, the context is widely appropriate for a statue. If the Surface functioned as a *campus*, a dedicatory statue on the periphery would not be out of place.\textsuperscript{158} There are examples of statue bases set up on the periphery of the *campi* found in both Dura Europas and Roman Britain.\textsuperscript{159} Furthermore, the

\begin{footnotes}
\footnote{One of these bases is double the width of the others, but even with its one wide face, it does not match the size of the Platform.}
\footnote{See Oleson et al. 2002, 110 – 112.}
\footnote{Reeves et al. (forthcoming).}
\end{footnotes}
monument to Hadrian mentioned above was eventually accompanied by a dedicatory column, which is certainly similar to a statue in concept. Moreover, the Platform is very near to the road entering the site from the north, so it would have been visible to those entering or exiting the site, which is also contextually appropriate for a statue base.

4.4.2 Civic Functions: Orientations and the Nabataean Context

Although a Roman military function is probably the simplest interpretation for any unidentified structure dating to the fort’s first occupation, the Platform does align with some interesting orientations that could suggest a civic function. A civic function, unlike a military function, might suggest that the Platform should be associated with a site-specific Nabataean cultural context and an indigenous tradition. Considering the evidence for the survival of Nabataean culture at the site during the fort’s first occupation, as represented by the E125 shrine and two Nabataean funerary inscriptions, it is worth considering this possibility. In order to delve into specific interpretations, two orientations need to be explained. These are followed by a discussion of possible other platforms from the Nabataean cultural tradition.

The first orientation, as noted above, relates to Structure A and the Platform’s alignment with the bathhouse and Nabataean structures of E077. The bathhouse, which was one of the longest functioning buildings on the site, had several occupational phases, but despite being rebuilt several times, never changed its Nabataean orientation as is evident from the adjacent Nabataean structures (Plate 3). To be specific, the east edge of the Platform is about 18° west of north; this angle is very similar to the east edge of E077 at about 16° west of north. The south edge of the Platform is also similarly only about 2° off of the south edge of E077. Clearly these

---

161 See: Hayajneh (2001); Bevan and Reeves (forthcoming); Reeves (forthcoming), (in preparation).
are not exactly the same, but they are very close. With the Platform matching the orientation of the bathhouse and also the adjacent Nabataean structures so closely, it could suggest that each structure adheres to an alignment associated with the original Nabataean settlement.

This assessment is not without complications. Admittedly, the study of ancient town planning still has many unanswered questions and requires considerable skepticism.¹⁶³ For instance, despite being oriented similarly, the Platform is far away from the bathhouse, its associated Nabataean structures and, in fact, the unexcavated Nabataean settlement around the western cisterns (Plate 1).¹⁶⁴ Given the distances between these structures it will remain unclear whether these shared orientations reflect town planning or random correlation until other buildings can be found to support or refute it. Another complication relates to preliminary phasing. If the measurement of the Platform indicates a Roman construction and the orientation indicates it is based on the Nabataean settlement, does this suggest that the Romans based their construction from an existing foundation, as with the bathhouse, or was the orientation somehow independently calculated? A probe through the Platform should answer this question. This first possibility would suggest that the Platform did have a Nabataean phase, but that the current construction is from the Roman period. On account of these issues, for the following discussion, the similar orientation between the structures of E121 and E077 should simply be seen as an indication of something worth investigating further. With this caveat, however, a Nabataean civic

¹⁶² Oleson 1990, 294 - 306; Reeves 1996, 50 - 51; Reeves et al. (forthcoming).
¹⁶³ De Geus 2003, 175. Although De Geus is most interested in the Iron Age Levant, his point is warranted. Without extensive excavation of multiple structures, it is difficult to discuss town planning on a larger scale. Although building-to-building analysis can be done, without a more complete road system or town plan it is hard to assign different periods to different orientations, without at least some supporting evidence. With that said, however, ancient town planning is still a growing field, and it could become invaluable to our knowledge of urban dynamics, both in small and large settlements.
interpretation of the Platform is preliminarily supported by the Platform’s similar orientation to that of another civic structure at the site.

A civic interpretation, however, is not solely supported by this structure-to-structure orientation. Rather, a second orientation relates to Jebel Qalkha, the dominant peak at of the site, which has been associated with the foundation myth and the E125 shrine. The Platform may have been deliberately oriented towards this hill. As Figure 4-6 suggests, the hill provides the only distinct backdrop for the Platform and would have been seen by anyone entering the site from the north and passing along the Platform’s east edge. If one is to pass the Platform along any other edge, the backdrops are insignificant. To be specific, in the Roman period if one were to pass the Platform on the north side looking south he would see the Nabataean reservoir (no. 63) in the distance and perhaps E125 (Fig. 4-6, bottom right); if one were to pass on the west side looking east he would see the presumed structure to the east northeast of E121 and the walls of the fort behind (Fig. 4-6, bottom left); finally, if one were to pass on the south side looking north he would see Phase 1 of Structure A, the road stretching north and the presumed campus (Fig. 4-6, top right). Passing the Platform on the east side and looking west provides the viewer with only natural and site specific background (Fig. 4-6, top left). As has been mentioned, the hill is significant on account of its relationship to the foundation myth of the site as well as its association with the E125 shrine.

________________________

165 See Chapter 2 for the overview of this myth.
Figure 4-6: The four orientations of the Platform – from the top left going clockwise: facing west, facing north, facing south, facing east. (Reeves)

The significance of the hill needs elaboration. Reeves has argued that the hill had a significant connection to the Nabataean and Roman town’s self-identity. The foundation myth certainly indicates a possible relationship in the literature. Archaeologically, the connection is most obviously identifiable with the E125 shrine, and particularly with the betyl located within it. For clarity, a betyl is simply a standing stone, either cut in relief or freestanding, which is generally set upon or attached to a raised platform and is an aniconic representation of a deity. Reeves suggests that the E125 betyl is the image of the local Nabataean god, the god of Hawara.

---

166 Reeves (forthcoming), (in preparation).
There are several possibilities for this god’s identity. One is simply a god named Hawara. Another could be Dushara, who was ‘the national god of the Nabataeans’ and was sometimes associated with the Shara mountains.\(^\text{168}\) Alternatively, it could be the god Qos, the name of the deity sometimes associated with the Nabataean shrine at Khirbet et-Tannur and equated with Dushara.\(^\text{169}\) Reeves further suggests that the deity is associated with the Jebel Qalkha’s role in funneling water into the settlement, hence \textit{auara}, as mentioned in Chapter 2, as being rain-fed land.\(^\text{170}\)

\(^{167}\) Avner (1999-2000, 98 – 106) provides an in-depth discussion of the subtle physical varieties seen within \textit{betyls} in the Negev and Sinai.


\(^{169}\) This assessment is based on an inscription from Khirbet et-Tannur, which identifies the shrine’s deity as the “god of \textit{hwrw}.” This inscription has been connected to an inscription from Hawara, which suggests the area’s deity stating the “servant (\textit{‘bd}) of \textit{hwr}.” See, Graf 1992, 74 – 75; Reeves (in preparation). Also see, Healey 2001, 61, 127.

\(^{170}\) Reeves (in preparation).
The E125 shrine, the god *and* the hill all share an important relationship, which can be observed through a few features of the E125 shrine and extended to the Platform. Firstly, as a worshipper walks through the shrine’s processional way, he can see Jebel Qalkha behind the naos. Secondly, once one is inside the *naos*, in front of the *betyl*, it becomes clear that this specific *betyl* has a relationship with the now out-of-view hill. This relationship is apparent because the *betyl* has a notch carved out of its flared base, which reflects a notch at the hill’s peak (Fig. 4-7).171 This notch is unique and is not seen on other *betyls*. While these specific details certainly help confirm the existence of a spiritual relationship between the site and hill, the

---

171 Reeves (forthcoming).
character of that relationship is more interpretive. Avner suggests, and Reeves supports, that the Nabataeans related their standing stones to specific natural high formations. The practice is most notably represented in Petra, with numerous high places on mountains maintaining sacrificial altars; the Petra Great High Place is a premier example of this as it is not only high itself, but also faces other high places. Such could be the case for the E125 betyl and the hill behind it. By extension, the Platform, with the same hill forming its only significant backdrop might have functioned in a similar capacity for worshippers entering the site from the north and paying immediate homage to the local deity.

The characterization of the relationship between the mountain and the standing stones which the worshippers face is very important. Avner supports the theory that the standing stone and mountain acted as a mediator between the divine and mortal realms as the worshipper kneels before it facing the stone and the mountain behind it. Wenning similarly supports the theory of a shared relationship between the standing stones and mountains in that Dushara could have a particular relationship with the Shara mountains. Both theories highlight the possibility of a shared relationship with natural landscapes and cultic items, specifically between standing stones and mountains. Avner has been able to identify sacred contexts with this relationship represented, particularly many open-air sanctuaries from the Nabataean period set with their back to high natural formations. Although not necessarily set on platforms, the standing stones in

---

175 Wenning 2001, 89; cf. Avner 1999-2000, 108. It is worth noting here that aniconic betyl representations of the god Dushara also have a particular relationship with the platforms they rest upon. It has been suggested, on account of two inscriptions (CIS II.350; CIS II.198), that Dushara betyls are set upon platforms named mwtb’ (motab or mot’ba). The mwtb’ has been interpreted as being literally the throne or seat of the god Dushara and even recognized as a separate object of veneration. See Wenning 2001: 88 – 89; Healey 2001: 158 – 159; Patrich 1990: 58 – 59, 91 – 92; Starcky 1965: col. 1010.
these sanctuaries maintained the same orientation as that found in the E125 shrine. Platforms, broadly, fit into the equation simply because it has been suggested that standing stones were placed on platforms as sanctuaries became permanent establishments. Wenning has suggested that the Petra Great High Place’s platform/altar had several areas for the placement of standing stones.\textsuperscript{177} Similarly, outside the Obodas Chapel, another freestanding platform is present, which might have functioned in a similar capacity.\textsuperscript{178}

The development of permanent platform structures to hold standing stones or betyls is also particularly important to this theory of sacred orientation. Specifically, it is helpful to consider the distinct platforms or podia within Nabataean temple structures from the Roman period. Not only are they structurally comparable with the Platform, they also help explain how open-air sanctuaries can, in fact, develop into permanent temple structures. Specifically, Netzer theorizes, and McKenzie supports, that many Nabataean temples contain a ‘nucleus,’ which was the adyton, or holy of holies, around which more permanent structures might be built.\textsuperscript{179} At the center of this adyton was often a freestanding raised platform on which the cultic images were placed. Netzer even suggests that most of these adyta would have begun as portable idols or altars, which are very similar to what Avner has identified as his open-air sanctuaries.\textsuperscript{180} The theory has two important implications. Firstly, it suggests that the large interior podium of Nabataean temples might similarly be associated as cultic platforms, like those mentioned above. Secondly, it suggests that the E121 Platform could be transitional, clearly not a temple podium, but also larger than a simple open-air sanctuary like Avner identifies in the Negev and Sinai.

\textsuperscript{178} Tholbecq 2005, 310.
\textsuperscript{179} Netzer 2003, 151 - 155; McKenzie 2004, 567.
\textsuperscript{180} Netzer 2003, 151 – 155.
There are several Nabataean temples with large central podia in their adyta that could be comparable with the Platform. The Temple of the Winged Lions and Qasr el-Bint are two from Petra, but they can also be seen at Khirbet et-Tannur and Khirbet edh-Dharih. These structures functioned in the same way as unenclosed freestanding cultic platforms, which could have held cultic images represented by betyls.\textsuperscript{181} The Khirbet et-Tannur temple and Qasr el-Bint are of particular interest because in their earliest phase there was no temple structure, only the central podium as a platform.\textsuperscript{182} All of these temples provide an interesting point of comparison for the Platform because they are large, raised, built structures. In this way the Platform is structurally more similar to them than to many other cultic platforms or niches, like the Petra Great High Place, which were hewn from single blocks of stone. Moreover, these Nabataean cultic structures remained in use during the Roman occupation.

Although it is an interesting possibility to relate the Platform to the spiritual alignment of the settlement, one obvious component is missing. No betyl or standing stone image was present during the excavation. Several scholars have suggested that there was a practice of having portable deity images.\textsuperscript{183} These images could be paraded on special occasions and also be displayed in different parts of a site over time.\textsuperscript{184} This practice may explain why many Nabataean cultic niches and portable shrines were carved without betyls, such as the niche at the house of Dorotheos in Petra.\textsuperscript{185} Clearly portable betyl images existed in cultic niches and as part of

\textsuperscript{181} Healey 2001, 159.
\textsuperscript{182} For Khirbet et-Tannur, see: Glueck 1937, 8 – 10; McKenzie 2002, 451 – 476; 2004, 567. For Qasr el-Bint, see: Larché and Zayadine 2003: 201; McKenzie 2004, 567; Netzer 2003, 127 – 128. It should be noted that McKenzie, although agreeing theoretically with Netzer, contests his interpretation of Qasr el-Bint in particular, highlighting that just its central chamber, not the entire tri-partite shrine area, was its adyton.
\textsuperscript{183} Mettinger 1995, 63, 102.
\textsuperscript{184} Tholbecq 2007, 123 – 124.
\textsuperscript{185} Dalman 1908, 318; Patrich 1990, 91. Dalman produced one of the seminal surveys of cultic niches in Petra and his work is still regularly cited by modern authors. Although other surveys have been done since,
portable shrines. They also probably existed for freestanding altars or cultic platforms, like that at the Petra Great High Place. Although speculative, it is possible that E121’s Platform held such an image.

Other media from the Roman period like coins offer other examples of freestanding Nabataean platforms. These Roman coins are the most commonly cited evidence for the assertion that betyls were placed on top of cultic platforms in a Nabataean context. Coins issued by Adraa, Bostra and Charachmoba depict raised podia or platforms on which a betyl or stele rests. The coins are of two-fold importance for this discussion. Firstly, they are Roman coins dating from around the mid to late second century CE, but they depict Nabataean cultural features of platforms and standing stones. Secondly, the displayed platforms are built detailed structures on which betyls rest. The significance of the first point is discussed in more detail below, but the second point needs some explanation.

Some physical details shown on the coins are worth considering because they match the Platform. The coins of Adraa, Bostra and Charachmoba all display on their platforms a raised edge. As mentioned in the Platform’s description, there is a raised stone along the east inner edge as well as the impression in the mortar of another possible raised stone along the east outer edge (See Fig. 4-1, 4-2). These may be indicative of a raised rim partially around the inner and outer edges of the Platform. The Charachmoba coin in particular depicts two tall rims flanking the betyl.

\[186\] Patrich 1990, 71 – 74, 91; also see Healey 2001, 159.
\[187\] Patrich 1990, 72 (Ill. 16).
Additionally, though a small physical detail, is the stepped appearance of the Platform. Having a staircase or being stepped is a very common feature of cultic platforms, but also more generally to Nabataean art and architecture. Staircases, for instance, are seen on almost all monumental podia, such as the podia in Qasr al-Bint. Even more broadly, stepped features have been identified on Nabataean tomb architecture, such as one in Mampsis in the Negev and at the graveyard in Khirbet edh-Dhariah.\(^\text{188}\) It is highly unlikely, since the Platform is so short, that it ever had a staircase, but the stepped appearance is a feature helpful for comparison. Although these details are very small, it is interesting that the Platform does exhibit some features typical of other cultic platforms and Nabataean cultic architecture.

These features, moreover, extend to other Nabataean cultic structures with other similarities to the Platform that should be considered. Although betyls have been proposed here as the cultic objects placed on top of the Platform, other objects are also possible. In a Nabataean context, the Platform could have held a nefesh, an obelisk-like funerary monument. Nefeshes do not always mark graves, as one might suspect, but are often set up in high traffic areas.\(^\text{189}\) Locally, for instance, surveys of the site demonstrated that most of the graves were in the hills to the west, whereas recent excavation has uncovered evidence that nefeshes might have stood in the town proper.\(^\text{190}\) To be specific, nefeshes might have stood on the road into town or in the E125 shrine temenos.\(^\text{191}\) Regionally, nefeshes are often placed in high traffic areas for optimal visibility, like those at the opening of the Petra Siq.\(^\text{192}\) This practice is certainly also very similar to statues. The

\(^{188}\) See: Negev (1971) and Lenoble (2001).
\(^{189}\) Bevan and Reeves (forthcoming).
\(^{190}\) Oleson et al., 1993, 147 – 149; 1995, 154 -155; 1995, 330; Bevan and Reeves (forthcoming); Reeves (forthcoming).
\(^{191}\) Bevan and Reeves (forthcoming); Reeves, (forthcoming).
\(^{192}\) Starky 1965; Also see, Bevan and Reeves (forthcoming); Joukowsky 2007, 390 – 391 for a nefesh on the staircase leading to up to Petra’s Great Temple.
Platform undoubtedly would be highly visible to anyone entering or exiting the urban center, especially because it is so close to the Nabataean reservoir (no. 63) and the main road entering and exiting the site.

Concerning *nefeshes*, most surviving examples are carved in relief either onto *stelae* or cliff faces, but in this case, as with the previously mentioned cultic platforms, freestanding examples provide the best point of comparison. *Nefeshes* are typically triangular in shape as obelisks or pyramids with square or cylindrical platforms beneath.\(^{193}\) This is not always the case; several subgroups of *nefeshes* exhibit slightly different features, such as lacking a bases or being topped with flowering cones.\(^{194}\) The freestanding examples, such as those found at Umm el Jimal and one in the graveyard of Khirbet edh-Dhiriah, follow the basic formula of base and obelisk.\(^{195}\) Khirbet edh-Dhiriah has several examples of *nefeshes* that are freestanding stones with the *nefeshes* actually cut in relief on them, which is also an interesting possible interpretation.\(^{196}\) Large solely relief versions can also be seen at Petra, specifically at the Temple of the Obelisks.\(^{197}\)

The issue of size, however, is problematic for the Platform as a *nefesh* base. If the Platform were functioning as the base of a *nefesh*, its size would predicate a very large obelisk or pyramid structure. Most *nefesh* bases are either the same width as the maximum width of the obelisk or just slightly larger.\(^{198}\) It does not seem plausible that the Platform supported an obelisk of that size. It is far more likely that the Platform would have been a foundation base for the base of a *nefesh*. If this were the case, the result would be the stepped structure with the

\(^{193}\) Patrich 1990, 122 – 123.

\(^{194}\) Bevan and Reeves (forthcoming); Patrich 1990, 122 – 123; also see Dalman (1908) and Littman (1914).

\(^{195}\) Littmann 1914, nos. 60 – 67; Lenoble et al. 2001, 92 – 94, 146.

\(^{196}\) Lenoble et al. 2001, 92 – 94.

\(^{197}\) Horsfield and Horsfield 1938, Plate. LXVII, 2.
Platform, a base and then the respective monument. Stepped features, as mentioned above, are common.\textsuperscript{199} In some respects, seeing the Platform as a foundation base for another base is a reasonable and conservative interpretation.

Both the cultic platform and \textit{nefesh} base interpretations extend from the same root thought: the Platform supported some freestanding, culturally Nabataean structure. The Platform, although showing Roman involvement, also demonstrates some possible Nabataean civic orientations. Both the Roman military theory and these Nabataean civic theories have some physical supporting evidence as mentioned above.\textsuperscript{200} It is necessary now, however, to discuss this and other contextual evidence that could support each cultural context for this Phase 1 structure.

\textbf{4.5 Discussion: The Platform and Cultural Context}

From this discussion of the Platform, there are a few crucial points that lend themselves to the most plausible solution of cultural context and function. If these features are understood within the proposed date range, the likelihood of these cultural contexts can be discussed. If the suggested mid second to third century CE date is accepted, several theories can be applied to the functions laid out above in order to assess their likelihood. The civic interpretation relies more heavily on site interpretation so it seems appropriate to begin there.

\textsuperscript{198} Bevan and Reeves (forthcoming).
\textsuperscript{199} One of the most dramatic of stepped structures is the stepped pyramid built over a Nabataean necropolis in Mampsis discussed by Negev (1971).
\textsuperscript{200} It should be noted that the above interpretations of the Platform as a tribunal, altar, cultic platform, or \textit{nefesh} podium were not the only interpretations proposed. Many others were suggested but the contextual evidence simply negates their possibility. For instance, the 1995 suggestion of a manufacturing press has no effective local or regional archaeological comparanda to support it, since it is not big enough nor does it have any of the associated features. A hydraulic function can similarly be ruled out for lack of evidence. Other theories of military function, like a ballista platform, likewise do not make sense tactically or physically, since the Platform is not built properly with a soft core to absorb the shock.
Several scholars have suggested that there was a resurgence of Nabataean culture after the mid second century during Roman occupation. This provides an interesting context in which to base the Nabataean civic interpretations. Locally, the recently found nefesh inscription and the E125 shrine inscriptions are valuable to this discussion. Regionally, the coins of Adraa, Bostra and Charachmoba and other Nabataean inscriptions are of particular interest to this cultural revival because they also date to this period and show Nabataean cultural expression in a Roman context. The earliest are from the mid second century CE from Adraa during the reign of Antoninus Pius. Thus, with the detailed similarities between the Platform and these cultic platform representations on the coins, it seems safe to suggest that the Platform adequately fits a Roman conception of how cultic platforms should look. This possible Roman perception is helpful because the Platform’s size is indicative of Roman involvement as are some of its physical details, but its shape and placement seem to have a specifically Nabataean cultural significance.

Concerning Roman understanding of Nabataean cultural elements during this resurgence period, there is some evidence locally that the Roman garrison made an effort to express a sense of concordia with the Nabataean townspeople sometime after the occupation. This harmony can be best observed, once again, at the E125 shrine. This shrine has a first century CE Nabataean phase, which ended with some destruction, but was followed by a reconstruction during the Roman period (mid second– third century CE). Most importantly, the shrine came to house the Nabataean betyl along with a Latin dedicatory altar made by the local garrison.

---

201 Bowersock 1990, 33; Patrich 1990, 73 – 75; Bevan and Reeves (forthcoming).
203 Reeves (in preparation).
204 Oleson et al. 2008, 312.
invoking the legion’s patron deity, Jupiter Ammon. The garrison’s effort to commemorate the two emperors’ safety, side by side with the Nabataean deity, in a sacred space is a dramatic display of goodwill or harmony and is not unprecedented. For instance, the coins from Bostra, the military headquarters of *Provincia Arabia*, show Jupiter Ammon shaking hands with the local patron deity or the personification of the city itself. The obverse legend on these coins read *CONCORDIA BOSTRENORUM* (harmony of the Bostrians). This same relationship is likely evoked at Hawara by the betyl and altar standing next to one another. The Roman garrisons seem to have understood that a positive relationship spiritually and civically would be beneficial. Such could be the case of the Platform and E121’s construction in general. If the garrison was interested in maintaining the goodwill of the town, there might have been an effort to rebuild old or construct new elements relating to the town’s gods during this period of cultural revival. The Platform could be associated with the same spiritual significance and, since its dimensions indicate likely Roman involvement, its construction could be contemporaneous with E125’s shrine reconstruction, in the late second to mid third century CE. This interpretation could explain why the Platform would conform to Roman measurements, but have a distinctly Nabataean orientation.

This civic involvement of the Roman military finds some support regionally. For instance, an inscription uncovered in Hegra confirms such activity. The inscription is particularly interesting because it displays the Roman military supporting the idea of *concordia* with a local

---


206 Reeves (forthcoming).

207 Kindler 1983, nos. 48, 56.

208 Reeves (in preparation).
population through the reconstruction of a civic structure. To be specific, a Roman centurion and a colleague, under the authority of the governor, worked together with the local community to have a dilapidated structure rebuilt, under the supervision of the local *primus civitatis* (first of citizens). Most importantly, the inscription dates to the same period as the aforementioned Bostra coins and Hawara’s redevelopment towards the end of the second century CE. Moreover, the inscription indicates the involvement of at least one Roman in a municipal construction project. Construction projects like these would not be uncommon for the Roman military, as the army tended to take responsibility for infrastructure, which often benefited the local communities.

If one is to accept this Nabataean civic interpretation as the most likely solution, several larger chronological site elements can be discussed. The *nefesh* inscription as evidence offers an interesting chronological point since it was reused in the fort for repairs. Its reuse is particularly important because it dates to the second occupation at the fort during the fourth century CE when the E125 shrine had also gone out of use. In sum, the local phasing of these two elements suggests that this Nabataean cultural re-expression only lasted about 100 years at Hawara, likely up to the point where the fort was first abandoned in the late third century CE. If the Platform were of Nabataean sacred or civic significance, it likely also would have gone out of use. Indeed, the reconstruction of Structure A to incorporate the Platform at E121 during the fourth century CE suggests this very phasing. The mirrored chronological phasing between E121, the E125 Shrine and the *nefesh*, although not conclusive about function, does suggest that they all had temporary cultural significance. This contrasts with structures like the bathhouse,

209 Al-Talhi and Al-Daire 2005, 208.
210 Al-Talhi and Al-Daire 2005, 208.
211 Campbell 1994, 121.
212 Bevan and Reeves (forthcoming).
which remain uniformly functional throughout their history, not going out of use permanently and benefiting from continual repair. The fact that structures like the Platform, the E125 shrine and the nefesh all ceased their original function by the fourth century CE suggests they all had only temporary cultural significance to Hawara’s vicani or soldiers. Whether this suggests that they all originated from the same Nabataean cultural background and resurgence is very hard to prove without more evidence, but it is certainly an interesting possibility. Another small point is the overall rise of Christianity during the fourth century CE, which might explain why a pagan shrine, like E125, might not be rebuilt, and a cultic platform might be reused as a floor.  

The civic interpretations, however, are the more complicated of the two suggested here. The simplest answer is that the Platform is a Roman military construction, served a Roman military function and likely went out of its primary use after the first abandonment of the fort. If this is the case, understanding the Platform as a tribunal is by far the simplest interpretation. There is also considerable evidence to support this theory. The surface found in E121, E129 and E130 suggest that a large, flat hard surface was present, optimal for a campus, a feature the fort likely had. The Platform’s placement on the periphery of this surface certainly gives credence to this interpretation. The biggest problem, however, is that the Platform is not very tall and would not necessarily function very well as a tribunal. One solution might be that the Platform is actually a secondary tribunal and that a taller one is still buried. Alternatively, the Platform could have functioned as an altar in tandem with either a temple structure, possibly in association with Structure A, or another tribunal.

---

214 See Chapter 5.
215 Reeves (forthcoming, in preparation) while suggesting this as a possible explanation for the abandonment of the shrine also highlights several fourth century CE churches being built in Roman forts during this period.
The military interpretation is more straightforward and develops the overall goals of the Project differently from the civic interpretation. The identification of a tribunal or associated structure is certainly interesting, but also typical of military sites and does necessarily shed as much light on the overall relationship between the garrison and the civilian community. Further research into campi and their relationship with civilian communities could on the other hand produce new and interesting results. In regards to phasing, however, since the Platform does seem to have gone out of its original function by the fourth century CE, it is clear that during the second occupation of the fort, the platform was not used in the same way as it was during the fort’s first occupation. This suggests that the campus possibly went out of use or was moved. Additionally, it could suggest that the smaller garrison simply had no need for such a large campus and the area was re-appropriated by members of the community or garrison for some other purpose.

The beginning of the previous section asked where the Platform originated culturally and what was it used for. This question cannot be answered conclusively. In function, the platform could be culturally Nabataean. The Platform’s alignment corresponds with one of to the site’s known Nabataean alignments and its context is distinctly appropriate for Nabataean constructions. On account of the Platform’s prominent location along a major roadway, alignment with the hill associated with the local cult and proximity to the open, Nabataean reservoir (no. 63), it could easily be a base for a nefesh or a standing stone. The growth of Nabataean-Roman cultural expression in the town during the mid second to the third century CE makes this cross-cultural collaboration seem appropriate especially since the Hegra inscription supports such a community involvement with the Romans. This, however, might be too complicated an answer. The Platform is almost indisputably a Roman construction. The exactness of the measurement is hard to ignore. The fact that the Roman Foot is only used at
Hawara during the Roman period and that there is fourth century CE reuse narrow the date. The construction method and physical characteristics similarly support this theory. Specifically, the mortar is more comparable with the Roman period mortar. A tribunal is a simple, straightforward answer, which still equally fits into the context of the site and does not rely distinctly on interpretive sacred orientations. In this way, the tribunal might be the simplest and best answer to function and cultural origin. Both functions, however, indicate that the narrowest date that could be applied to Phase 1 is the mid second to third century CE. This date is reasonable, but entails a complex phasing with use, abandonment and reuse. It, however, also comfortably corresponds to the first phase of the Roman fort’s occupation, the *vicus* development and the eventual abandonment of multiple structures throughout the site.

### 4.6 Phase 1: Concluding Remarks

Phase 1 is the most complicated phase of E121, yet also the most interesting. It leaves considerable room for research opportunities, yet remains largely unresolved. It can fit comfortably in the known chronology of Hawara, yet its temporal range is still hazy. Phase 1, by itself, makes E121 a fascinating exercise in research. It is clear that the area has multiple occupational phases. The varying construction materials and orientations, the physical and contextual similarities with other areas locally and regionally and the obvious signs of reuse all point out that something was there before excavation confirmed its later fourth century CE occupation.

The nature of the Phase 1 occupation is certainly the most compelling question concerning E121. If indeed the Platform, and Structure A by extension, are the products of the Roman garrison, this adds to our knowledge of the development of the *vicus* area during this period. Such is especially important information for a small settlement in the hinterlands of a
larger city, like Petra. Although certain information about Roman civic relationships can be
determined through historical sources and epigraphy, in a small settlement there is often little
information to explain the character of the relationship. The attention given to civic and possibly
sacred orientation is particularly fascinating and telling at E121. If this care is indicative of the
military and civilian relationship, it is obvious that a dynamic relationship was undertaken by
both parties. Whether or not one wants to understand the Romans as imperial aggressors on the
frontiers of its empire, archaeological information like this suggests that the Romans cultivated a
relationship with their subjects and supported social and cultural development to a certain extent.

The possibly sacred nature of the Platform also deserves at least one final note. Bartlett
bluntly surmised the dilemma of sacred interpretations well: “Understanding the religion of a
people who lived two millennia ago is almost impossible.”216 Undoubtedly, the theories and
suggestions concerning sacred space presented here are likely to develop further. They can,
however, explain context very effectively. With orientation already being researched at the site,
the uncovered nefesh inscription found just east of the Platform and the appropriate context, a
sacred interpretation seems like an answer worth recognizing.

Finally, Phase 1 cannot be more fully defined without more excavation, but more
excavation will not necessarily define Phase 1 more fully. There might simply be no information
left. The recycling of construction material in antiquity coupled with modern reuse and farming
damage might have removed any conclusive evidence for narrowing the date further or discerning
a function. This interpretation and the information found in the excavation reports must suffice
for now and may have to do so ultimately. On the other hand, probing the Platform could

216 Bartlett 2007, 55.
ultimately answer whether there was a Nabataean phase underneath it. This knowledge could significantly narrow down the interpretations.

Research on Phase 1 is far from exhausted. Although the focus on local and regional comparanda has produced some compelling results, inevitably there is more that could be used. With the information provided, the most important factor is clear: there was an occupational phase before the fourth century CE. This occupational phase likely happened between the mid second and third century CE. It was then likely followed by a period of abandonment, probably mirroring that of the fort at the end of the third century CE, and then a period of reoccupation in the fourth century. This period, lasting until the end of the fourth century CE, is Phase 2 and is discussed in the following chapter.
Chapter 5
Phases 2 and 3: Fourth Century CE and Later Occupation

The second phase of E121 is temporally more certain than Phase 1, but lends itself less well to interpretive analysis. Phase 2, on account of more conclusive ceramic evidence, numismatic evidence and structural differences with Phase 1, can more concisely be dated around the mid to late fourth century CE. This date is largely associated with the reoccupation and reconstruction of Structure A and the large ash layer resting on top of the hard packed Surface found throughout the northern section of E121. The details and evidence concerning Phase 2 are presented in this chapter along with the remaining physical description of Structure A and a discussion of the large ash deposit. Both of these topics are discussed in their local context; they are simply too disturbed and ill-defined for regional analysis.

The third phase of E121 incorporates Structure B and presents different problems for interpretation. The stratigraphy indicates that Structure B was built after Phase 2. The actual date of Phase 3, however, is unclear. Fortunately, Structure B’s physical characteristics offer themselves to regional analysis. A physical description of Structure B is included as well as the evidence dating it after Phase 2. These two phases have been included in this single chapter because both offer fewer opportunities than the Platform and Phase 1 for interpretive analysis. Local archaeological reports and appropriate regional comparanda provide ample evidence to discuss these phases in terms of the Project’s current research goals of understanding the civilian vicus and its relationship with the military garrison.
5.1 Structure A in Phase 2: Rebuilding out of Line

The architectural neatness of Structure A’s north corner and its parallel relationship with the Platform, as presented in Chapter 4, stood out as a physical anomaly. The remainder of Structure A, however, is more uniform in its cruder construction methods, demonstrating a heavier reliance on un-cut boulders, cobbles and mud-packing. Furthermore, in Phase 2, Structure A also shows signs of further manipulation of its orientation. Thus, it seems Walls 802, 04 and 03 were reubuilt during Phase 2 for a different function than their Phase 1 predecessors (Fig. 5-1). Each wall contributes to this interpretation and needs to be discussed individually. Also much can be discerned about the upper-courses from the wall tumble found inside Structure A, adjacent to Walls 802 and 04. Thus, the tumble is discussed as an individual element as well.
5.1.1 Understanding Walls 03, 04 and 802 in Phase 2

It is necessary to discuss Wall 802 first as it is the largest and likely the most structurally important wall. Its preserved length is 4.81 m, though it appears to have been once longer, extending south past Wall 04 towards the northeast corner of the Platform and possibly beyond that. This extension is suggested by the lone stones attached to Wall 802’s southern end (Fig. 5-1). Wall 802 is best preserved closer to the north corner where it is 0.745 m wide with two built faces and a cobble core in mud packing. Given the fact that very little tumble was present around this north corner, it is arguable that this northern section of Wall 802 did not fully collapse like the southern section and thus was preserved in a better state. On account of Wall 820 and Wall 04 progressing westward, it seems plausible that the west face of Wall 802 is the inner face of Structure A, whereas the east is the outer. The area enclosed by these walls forms the first of two rooms Structure A appears to have had. The southern portion of Wall 802, closer to Wall 04, has a clear outer eastern face, but the inner western face is highly deteriorated. As noted, this southern portion of the western face fully collapsed resulting in a considerable amount of large and small stone wall tumble dominating the southern inner area of Structure A (Fig. 5-2).

At its tallest, Wall 802 is 0.69 m high having two large stone courses making its outer eastern face, but three smaller courses forming its inner western face. As was noted in Chapter 4, the outer eastern face is slightly concave, either the result of earthquake damage or in an attempt to enclose the Platform with a southern extension. This southern extension is important because it, with Wall 04 and the opposite Wall 03, seem to form the second room of Structure A, which made use of the Platform as a floor, as is discussed below.

217 The collapse of the inner western face of the southern half of Wall 802 has also resulted in the southern half of the wall appearing wider on Plate 2. This is not because the southern half of the wall was wider; rather it is because the rubble core has spilled out into the interior of the Structure A.
Figure 5-2: The interior of Structure A – Wall 802 and collapsed tumble

The actual method of construction is more problematic, but some of the features of Wall 802 are clear. For instance, it is obvious from the diversity of stones containing a haphazard mixture of ashlar masonry, boulders and cobbles that this construction used whatever was available. There are several large stones on the eastern outer face, but their shapes vary so distinctly from one another that mud packing and cobbles were required to fill in gaps. As previously noted, this collection of stones contrasts clearly with the ashlar masonry of the northern corner of Structure A. In addition to more varied stonework, the southern portion of the inner western face is heavily deteriorated making construction methods hard to recognize. Nevertheless, with large stones dominating the eastern face of Wall 802 and cobbles still present in the core, as is visible in the tumble, it seems likely that there was an attempt to mimic the
Phase 1 construction methods with largely uncut stones (Fig. 5-2). Finally, mud packing bonds the entire structure together.

Despite the fact that Wall 802 is heavily deteriorated, there are several examples of this suggested construction technique locally. For instance, a very similar construction method was used in the Roman fort during its first occupation. The latrine near the west gate of the fort (E116, Area N) contained “walls constructed of heavy blocks and boulders facing a core of rubble set in mud packing.”\footnote{Oleson \textit{et al.} 2008, 326.} In the \textit{vicus}, the technique was also used for the Roman period reconstruction of the E125 shrine \textit{naos}, though with a heavier reliance on mud packing. Both this \textit{vicus} construction and the fort constructions, however, predate Structure A’s suggested Phase 2 reconstruction in the fourth century CE. Although the dates of these examples are somewhat problematic, Structure A’s similarity to these second to third century CE Roman period constructions is interesting and could still suggest some later Roman involvement in its construction.\footnote{Oleson \textit{et al.} 2008, 326.} One aspect supporting this assertion is that Structure A is predominantly a stone construction, as opposed to a mudbrick structure. Several concerns still exist, however, and are discussed below.

Wall 04 is also likely associated with Phase 2 of Structure A. This assertion, likewise noted in Chapter 4, is primarily dependent upon Wall 04 not running parallel to Wall 820 and the north edge of the Platform. Additionally, Wall 04 does not fully bond with Wall 802 or Wall 03 like Wall 820 does with Wall 802. Physically, Wall 04 is significantly smaller than Wall 802. It is 3.65m long and does not appear to have extended further in any direction. Its largest width is only 0.53 m and its extant height in 1995 was 0.75 m. The wall is two courses tall, though the cobble debris indicates that it was taller at one point. It is also two courses wide, but was unlikely
any wider, as its foundation does not extend any further. The best-preserved segment is the southern face. The lowest course of this face has several good-quality, Nabataean dressed, ashlar blocks in a row, tightly packed with little mud-packing between them. With such regular stonework, the construction quality appears to be rather good. Ashlar blocks do not, however, make up the entirety of this lowest course as these blocks are flanked by more irregular boulders, cobbles and heavy mud packing. Moreover, the second course of Wall 04’s southern face, formed primarily of unshaped stones, is similar to the southern section of Wall 802. The northern face of Wall 04, similar to the southern inner portion of Wall 802, suffered considerable damage when the wall collapsed into the northern room. Little can be said about this northern face except that it did not survive as well as its southern counterpart. Additionally, it seems clear that Wall 04 separated the two rooms of Structure A.

Whether Wall 04 is a reconstruction of a Phase 1 wall or a completely new construction is hard to answer definitively. Its contrasting orientation with the Platform and Wall 820, and only partially bonded corner with Wall 802 could suggest that Wall 04 is a completely new construction limited solely to Phase 2. It is possible that during Phase 1 Structure A did not require this cross wall and that only a single room existed. This interpretation, however, assumes that the unknown western portion of Structure A closed off somewhere in Square 10. The collection of good-quality, Nabataean dressed stones making up the lowest course of Wall 04 could support this, indicating early Phase 1 Roman craftsmanship. Such is a possibility, but these ashlar blocks are very common and not really an appropriate phasing indicator given the amount of reuse at the site. Alternatively, an earlier wall may have existed during Phase 1 close to where Wall 04 is, but had its orientation altered during Phase 2 as Wall 802 was rebuilt with a slight concavity. As an indicator of a Phase 1 construction, the good-quality of Wall 04’s craftsmanship

is slightly more convincing. If, however, the Roman military was involved in any Phase 2 construction at E121, this quality craftsmanship should not come as a major surprise. The military was certainly capable of constructing quality stone walls when materials were available.

Wall 03, much like the absent southern extension of Wall 802, was robbed out and is truly only the shadow of a wall. Like Wall 04, it was originally uncovered during the 1995 season, but suffered considerable weathering and damage leading up to the 2008 season. It was not possible to determine its exact dimensions during the 2008 season. Photos from 1995 suggest that it was two courses tall. The contemporary notes state it was 3.4 m long (Fig. 5-3). The 1995 records also indicate that it ran parallel to the west edge of the Platform, a feature discussed below. Little can be extrapolated from Wall 03 except for a few details. The most obvious is that
the wall would have also run relatively parallel to Wall 802 and possibly connected up to Wall 820 in Square 10 had it survived. Wall 03 also likely contained the entrance to Structure A, though Wall 820 is another possible candidate, since there are no known doors (or windows) on Wall 04 or Wall 802. Interestingly, both Wall 03 and Wall 820 are cut off at some point in the west baulk of Square 07, and do not continue westward into Square 10. This is likely a result of both robbing and local plowing. As previously noted, there are several cultivated fields in the area, which shift yearly and have in the past been very close to E121. This element of the site was made evident during the 2008 excavation at E130, c. 125 m northeast of E121, which uncovered old plow furrows beneath the topsoil. A final odd detail about Wall 03 is the way it was constructed. Several large ashlar blocks with Nabataean trimming are present. This trimming, however, is not facing out with the blocks laid down as stretchers, as is typical and is seen on Wall 04 and Wall 802. Rather the blocks are set as headers so the trimming is not visible (Fig. 5-4). The feature is visible now only because the wall is so deteriorated.

Figure 5-4: Walls 03 and 04 from the south, peculiar orientation of Wall 03's blocks

The 1995 suggestion that Wall 03 was parallel to the west edge of the Platform is an interesting piece of information. Orientation has been used extensively to help indicate phasing

---

220 Reeves et al. (forthcoming).
for Structure A, especially the parallel lines between it, the Platform, and other buildings at Hawara. It is tempting then to suggest that Wall 03 may also be a Phase 1 wall since it lines up distinctly with the Platform. This is a possibility, but it seems unlikely that Wall 03 is a Phase 1 construction. The peculiar use of the Nabataean blocks partially supports this. More crucially, however, is Wall 802’s robbed out southern extension (See: Fig. 5-1). Physically, the extension most clearly is from Phase 2: the concavity of Wall 802, the poor stonework and the extensive mud packing all suggest this. Its functional purpose, however, is of most interest. It seems likely that Wall 802 was elongated so that Structure A could reuse the Platform as a floor. A beaten earth floor (Locus 09) was found between Wall 04, Wall 802’s southern extension and Wall 03 with the same top elevation (959.945 masl) as the Platform. This beaten earth floor and the Platform form a contiguous surface and clearly demonstrate that the purpose for extending Structure A was to make use of the Platform. Additionally, the incorporation of the Platform could support the idea that Wall 802’s concavity is intentional. If the wall had been built perfectly straight, it would have hit the northeast corner of the Platform. These details affect the phasing of Wall 03. Since Wall 03 is built above the beaten earth floor (Locus 09) just as Wall 802’s southern extension is, it seems likely that the two walls served the same function: to extend the structure south in order to incorporate the Platform as a floor. It seems unlikely that Wall 03 was built in Phase 1.

5.1.2 Imagined Walls: The Wall Tumble of Structure A

Although the walls of Structure A are particularly valuable for introducing its complex phasing, the tumble is an interesting tool for examining the walls before their collapse. The tumble in question here is that uncovered adjacent to the north of Wall 04, excavated partially in 1995 as Locus 10, excavated in 2008 as Locus 812 (See: Fig. 5-2). The fall pattern of the tumble along with the stone content offers a sense of Structure A’s upper courses. Unfortunately, both
Locus 10 and Locus 812 were concentrated around the corner of Wall 04 and Wall 802 and thus it is hard to distinguish which tumble came from which wall. The relative uniformity of the tumble, however, essentially annuls this problem. Less tumble was visible in the northern section of Structure A near Wall 820 suggesting that this section likely lasted longer and was possibly dismantled as opposed to collapsing.

The character of the tumble is of interest, mostly for what it lacks. It consisted primarily of cobbles, but a few larger boulders were present. The prevalence of cobbles and boulders in the walls themselves suggests the obvious: stone construction remained present for the upper courses. The enormity of cobbles in the tumble could indicate that they were used more extensively as the walls were built up. More importantly, as mentioned above, unlike many other structures at Hawara, like E125 and E128, there is no evidence of mudbrick or pisé construction for the upper courses. Interestingly, the stone structures in use during the fourth century CE period like the bathhouse (E077), parts of the Roman fort (E116) and the cisterns were all associated with Roman construction or maintenance. Especially when noting once again E121’s proximity to the fort, it seems probable that the Roman garrison had something to do with its reconstruction. Further excavation in the vicus, from both the first and second occupations of the fort, along with further probes at E121 should help support or refute this suggestion.

221 The relative phasing of E125 and E128 are important for this point. They both have only squatter reuse in the fourth century and both display stone foundations with mudbrick walls as well as pise walls. See: Oleson et al. (2003, 2008) and Reeves et al. (forthcoming).
5.1.3 Hitting the Bottom: Beaten Earth Floors

Below the tumble, inside Structure A, there is one last final feature worth mentioning. This is the beaten earth floor (Locus 814), which is similar in colour, consistency and elevation to the other beaten earth floor (Locus 09) on the opposite side of Wall 04. Floor 814 is peculiar in that several oblong pits were present in it (Fig. 5-5). The pits had been full of loose sandy soil, different from the floor itself, but did not contain any distinct ceramics or small finds. The purpose of the pits is unclear, but it seems that they were dug while Structure A was in use. It was suggested during the excavation that they might have been used to support large amphorae or other round bottom vessels. Their irregular shapes, however, seems to detract from any such theory as amphorae could not actually fit into many of them. The depressions may also have been a result of the walls collapsing or even other natural deterioration. Unfortunately, the pits are not very helpful as they do not even seem to give a sense of the thickness of the floor or what the area functioned as. The floor is clearly at the bottom of Walls 04, 802 and 820 so it does not
appear that the pits are part of a later phase. In sum, little can be said, though further probes and excavation might help define them further.

This completes the physical overview of Structure A in Phase 2. It should be noted that Wall 820 as well as the north corner of Structure A were left out since they were presented in Chapter 4. Although this overview has presented the architectural evidence for phasing and construction, the ceramics and other small finds need to be addressed. The wall tumble, once again, plays an important role in this.

5.2 Date and Function: Small Finds and Contextual Evidence for Phase 2

Unlike Phase 1, there are several loci that help isolate a date range for the collapse of Structure A. Determining exactly when the structure was built is decidedly more difficult, but a certain amount of inference is possible. Of course, the most dramatic find of E121, the bronze coin collection, is also part of this and helps considerably in narrowing the date of collapse. There are several contextual concerns for each element, but they are addressed accordingly below. Additionally, how each element contributes to the chronology is discussed as it arises. Ceramics, as the most common dating tool, serve as a good starting point. The nature of the ceramics in this case also can help us determine some functional associations.

5.2.1 The Ceramics of Structure A: Date and Collapse

The most important ceramics for dating Structure A’s collapse come from three different wall tumble loci: Locus 810, 812, 813. Loci 810 and 812 are both the actual wall tumble from the north room of Structure A. Very little tumble was uncovered in the south room according to the 1995 notes. Locus 810 is from the northern section of the room close to Wall 820 and consisted

---

222 Reeves et al. (forthcoming).
of cobbles. Locus 812, however, is the tumble from the southern portion of Structure A’s north room, closer to Wall 04. This tumble consisted of both large boulders and cobbles and was very concentrated. In contrast, Locus 813 was the loose soil immediately covering Locus 814, the aforementioned beaten earth floor. The two tumble loci produced slightly different results. Locus 810 had a large concentration of sherds with very few diagnostics suggesting a second century CE date; Locus 812, however, had very few sherds, but several diagnostics, including a typical early Byzantine lamp base suggesting a fourth – fifth century CE date, which would fit comfortably with a possible late collapse date. Locus 813, covering the entire visible interior floor of Structure A, produced its own mixture of these results. Although earlier sherds emerged from the locus, such as an imported late body fragment of Eastern Terra Sigillata likely from the second century CE, it also produced several later kitchen ware forms from the fourth century CE. These later sherds, of course, support the fourth – fifth century CE collapse. The presence of earlier sherds mixed with later sherds is hardly surprising. The continued occupation of Hawara from the first century BCE to the eighth century CE has left the site littered with sherds, such that almost no later collections exist without the presence of earlier sherds. Thus, these earlier sherds should not necessarily be understood as representing occupation during the period. Furthermore, these were not true closed loci and represent the collection of ceramics before the collapse. This point is important for interpreting why Structure A might have collapsed. It seems earthquake damage can likely be ruled out. There were several documented earthquakes in the region during the fourth century CE, notably one in 363 CE. If this or another earthquake

---

caused the collapse, one would have expected to find earlier ceramics and the room not entirely cleared out.\textsuperscript{225}

The ceramics from the exterior of Structure A, although less conclusive for dating the collapse, shed some light on the ceramic character of E121 more broadly and how it compares to the rest of the site. Although the soil strata were not the same on both sides of the wall, the ceramics collected from the external foundation level of Wall 802 offer some possibly contemporaneous use with the interior ceramics. This locus, Locus 807, like Locus 813, was under a large cobble layer (Locus 805) possibly associated with Wall 802. The ceramics mirrored Locus 813 in that they were predominantly domestic kitchen, coarse and storage wares. The diagnostic sherds, especially some of the kitchen wares, suggested a fourth – fifth century CE date, though some earlier forms were present. Most surprisingly, there were a few examples of imported wares, notably an African red slip fine ware base, likely third – fourth century CE, and some regional Aqaba ware. In the cobble layer (Locus 805) immediately above Locus 807, the forms and general character of the ceramics were very similar: a third – fifth century CE range based on domestic kitchen or coarse wares, occasional fine wares and a few sherds from regionally imported vessels. Although it is very hard to relate the known imported vessels to E121 and its function, their presence does have implications for the site as a whole. These sherds could indicate the continued importation of goods through the fourth century CE and possibly into the fifth century CE.\textsuperscript{226} This characteristic is worth noting because Pollard has suggested that in Syria the Roman military relied predominantly on local production for goods.\textsuperscript{227} Clearly the evidence here is scant, but it does represent at least a possible topic of research for future seasons.

\textsuperscript{225} Russell 1980, 48 – 49.

\textsuperscript{226} See Shelton in Reeves et al. (forthcoming) for a complete discussion.

\textsuperscript{227} Pollard 2000, 187.
This topic could be particularly fruitful since there is no known local ceramic production at Hawara, which suggests that the military would have had to rely extensively on regional importation, notably from Petra and Aqaba.\textsuperscript{228}

In 1995 several focused probes were also excavated that help identify several specific features of E121. Firstly, a probe of the beaten earth floor south of Wall 04 and north of the Platform (Locus 09) was excavated adjacent to Wall 04. This probe (Loci 12, 13, 14) confirms that the beaten earth surface was produced during Phase 2, as each locus produced only Late Roman and Early Byzantine sherds. In association with this, the triangular shaped foundation probe conducted adjacent to the Platform’s east edge and the east and north baulks (Square 02, Loci 10, 11) also produced contemporary Late Roman and Early Byzantine ceramics. It is important to note that no continuation of Wall 802 was preserved east of the Platform so this fill is heavily disturbed and not entirely useful for dating. The significance of these two probes is discussed below.

In sum, the pottery of Structure A is helpful for dating the collapse of the building to the late fourth – fifth century CE. The presence of imported wares, even if they cannot be effectively associated with E121’s function as a structure, are helpful as well for posing new research questions about how the military supplied itself through regional and long distance trade. Had the ceramics been more definitive, it might have been possible to do more distinct regional analysis. As of now, however, this more conservative interpretation must suffice. Further excavation of other \textit{vicus} structures occupied in the fourth century CE could help define the character of the ceramics further.

\textsuperscript{228} See note 224.
5.2.2 The Bronze Coins of Structure A: The End of Occupation

The 32 bronze coins uncovered during the 1995 season has been referred to extensively. Here, as with the ceramics, the coins are discussed as a unit with specific examples drawn from the collection. Unfortunately, the context of the coins is not as helpful as one might hope. As has been noted, they were uncovered during the baulk collapse between Squares 07 and 02 during which the ceramics were not recorded. Moreover, the coins were drawn from an open soil stratum c. 0.25 m above the beaten earth floor (Locus 09) between the Platform and Wall 03, but undefined by any wall collapse or other features. They are, in essence, from an undefined area of occupation. Some comments can, however, be made.

Firstly, as stated the coins were found several centimeters above the floor level. The baulk collapse went through several soil layers, but the coins’ elevation was recorded as part of Locus 16. The elevation of Locus 16 corresponds to Locus 07 in Square 07. Locus 07 was a loose, grayish brown soil locus immediately south of Wall 04, above Locus 09, the beaten earth floor. Locus 07 did not show signs of wall tumble from Wall 04 as only a few cobbles were present. It is clear that the coins were not immediately on the floor, but were indeed close. 0.25 m of fill is not very much, especially when one considers that the entire excavation area of the 1995 season, over a meter deep, was entirely filled with new soil and sprouting new plant growth by the 2008 season. 0.25 m of soil could be accumulated very quickly if Structure A was not maintained, especially if any walls had collapsed as discussed below. Several of the coins were actually found stacked (Locus 16). The context of the others (Locus 15, Locus 17) was disturbed during the baulk collapse so it is unclear how they were situated. This set up likely indicates that the coins were in a pouch or vessel and dropped all at once. Only two other coins were found in E121: one above the Platform in Square 02 (Locus 06) and another in the eastern probe (Locus 801) of Square 10.
On account of these contextual details, it seems unlikely that the coins were left while Structure A and the Platform were in use during Phase 2. But, the fact that they were close to the floor level of Locus 09 suggests that they were left likely immediately after the abandonment of the structure or actually during the abandonment. The biggest, yet unanswerable, concern is whether this was before or after the collapse of the structure. Although the evidence does not unequivocally show the sequences of events, it seems likely that the abandonment of E121, the collapse of Structure A and the dropping of the coins all happened relatively close to one another.

The latest coins, those of Arcadius, who reigned from 378 – 408 CE, indicates that the coins were likely dropped at the end of the fourth century CE or beginning of the fifth century CE. Interestingly, very few Arcadius coins have been found at Hawara, the most significant being several ancient solidi forgeries found together outside the urban centre with pieces of gold jewelry and silver Sassanian coins.229 The paucity of Arcadius’ coins at Hawara’s finds might be used to indicate a relative decline in activity at the site during his reign. The date does correspond comfortably with the final abandonment of the fort.230 With the ceramics similarly corresponding to this date and being notably similar in character to other Roman military sites, it seems fair to assume that Structure A and the reused Platform were abandoned most likely at the same point that the fort was abandoned.

5.2.3 The Surface: Considering Hard Layers and the Natural Context

The Surface of E121 has been referred to several times, but not specifically addressed. At E121, the Surface is a very hard packed soil with white nodule inclusions. It is present in Squares 08, 09, 11 and 12, but its actual full extent is not clear. As has been noted, it was not

229 de Brujin and Dudley 1995, 683.
uniformly consistent between the squares. In Square 11 for instance, it was in excellent condition, whereas in Square 09 it was degraded with many holes. In Square 08 it also appeared to have a cut edge, which is discussed extensively below. The Surface was not particularly thick in any square of E121. In Square 09 it averaged around 0.05 m thick, likely the cause of its quick deterioration, and in Square 11, where probes were done, it was closer to 0.30 m thick in certain places. This shallowness contrasts distinctly with other areas of Hawara like at E129 where the Surface was 0.90 m thick. The ash layer, dating to Phase 2, was also found extensively on the Surface, which is a good indication that the Surface was exposed at the time of Structure A’s second occupation.

It seems likely, pending further analysis, that the white nodules are calcium carbonate, the result of evaporated moisture in the soil. The moisture is probably the result of the extensive cultivation of the area and the natural water catchment zone in which the area lies. It is highly likely that the Surface is a natural soil layer. Not surprisingly, this hard packed, nodule filled surface is common to Hawara and in fact is present throughout the site seemingly from multiple periods of occupation. To be specific, a similar surface, though far thicker, appears beneath the *Via principalis dextra* in the fort. Likewise, from an even earlier period, recent excavations of E077 revealed a similar surface beneath the earliest foundation levels, likely dating to the Nabataean period. North of E121, at E129 and E130, a thick layer of this surface was also found from a more uncertain date. These local surfaces are all far thicker than that at E121, but are similar in consistency. Regionally, a similar, though not entirely identical, lime-mash surface was laid under the el-Leijun fort.

---

231 Ruellan (1973); Reeves et al. (forthcoming).
233 Reeves et al. (forthcoming).
234 Groot et al. 2006, 163 - 164.
Despite this surface likely being a natural layer, it seems reasonable to assume that the inhabitants of Hawara probably made use of it. The heavily sanded character of the site, which was recognized even by the earliest surveyors like Stein, made the area difficult to pass through or, in fact, build on. A hard surface such as the one found at E121 and elsewhere, would clearly have made these actions far easier. Moreover, it is clear that the Surface of E121 was exposed for a long enough period of time for incredible amounts of ash to be deposited on it, which is a distinct indication that the inhabitants knew about the presence of the Surface. The pragmatic Romans and Nabataeans hardly would have let such a widespread firm surface go to waste.

Although the Surface of E121 likely has little to do with Structure A’s overall function and purpose in Phase 2, since the area was still being used as an ash dump, its value to the site as a whole is worth mentioning. Most recently, Reeves has associated it with the presence of an unpaved section of the *Via Nova Traiana* at the site or possibly even the fort’s *campus*, as was discussed in Chapter 4. Both these theories are certainly plausible for Phase 1, though it seems less likely for Phase 2 on account of the area’s reuse as an ash dump. As stated in Chapter 4 though, whatever *campus* there might have been could have gone out of use and another come into use. Further excavation of this surface both adjacent to E121 and elsewhere could shed more light on its relative function for the area and the site as a whole during these differing periods.

What is most crucial about the Surface of E121 is simply that the presence of the ash indicates that the Surface was visible and known to the inhabitants of Hawara during the fourth century CE. Unfortunately, it is hard to prove whether it was visible during Phase 1, though it seems very likely.

---

235 Stein 1940, 437.
236 Reeves *et al.* (forthcoming).
5.2.4 The Ash Deposit: Local Contributions to Phase 2

The ash deposit, uncovered in Squares 08, 09, 11 and 12 and represented by seven contiguous loci is incredibly large, not fully defined, and not easily understandable. In many places, it rested immediately on top of the Surface, staining it a pale grey-blue (Square 08 Locus 803; Square 09 Locus 803; Square 11 Locus 802; Square 12 Locus 805). Further north and west, in Square 09, this segment of ash (Square 09 Locus 807, Locus 812) was separated from the Surface by a layer of loose soil (Square 09 Locus 808, Locus 814). The ash continues clearly under Structure B in Squares 09 and 12, but was not found in the probes through the wall tumble of Structure B. Although not clearly the deposit of anything in particular, the ash contains the remnants of considerable amounts of ceramics along with animal bone, metal and other small finds like glass. The ceramics, given their quantity, are the most significant and worth discussing first.

The character of the ceramics, much like the character of the ceramics from Structure A, is relatively utilitarian. Every ash locus was dominated primarily with coarse, kitchen and storage ware sherds with no obvious restorable vessels or assemblages. Additionally, the majority of the ceramics seemed to point to a later date, but none particularly extended past the fifth century CE. While an African red slip body sherd was found in Locus 806 of Square 09 and another in Locus 805 of Square 12, the number of fine ware sherds was much smaller than the coarse, kitchen, or storage sherds. So few sherds, of course, carry very little weight. The ash ceramics do have a few differences from the Structure A ceramics. Firstly, there is evidence of significant burning on some of the sherds (Square 08 Locus 803; Square 09 Locus 806; Square 12 Locus 805). This charring is not universal, but it is certainly more present than it is anywhere else in E121. Another oddity appears in Square 12’s Locus 805. This locus produced 10 sherds of roof tile, a
hypocaust tile and 4 sherds of waterpipe. This is by far the highest concentration of tile ceramics in E121. These pieces did not show evidence of charring, but were found alongside burnt sherds. These small differences between the loci do present a complex problem that requires a look at the other contents of the ash before presenting any possible solutions.

The non-ceramic finds from the ash fill in some of the picture, but very little of them are diagnostic. Mammal bone fragments were found consistently throughout the ash layer, particularly concentrated in Square 09 Locus 812 and Square 12 Locus 805. Burning was present on some of the bones but, like the ceramics, was not universal. Along with the mammal bone, occasional fragments of seashell were uncovered and the rare fish bone. Beyond animal remains, several typical iron pieces were found. A pair of bulbous headed tacks were uncovered, one in Square 12 Locus 805 and the other in Square 09 Locus 807. These objects are fairly common and other better examples were found in E121 not associated with the ash, like in Square 08 Locus 807 or Square 09 Locus 808. The ash of Square 09 Locus 803 produced a small number of different iron objects including an iron arrowhead and a small iron ring, neither of which are particularly helpful noting their pervasiveness at the site and, in this case, level of degradation. Additionally from Square 09 Locus 803, came a small iron tool, possibly a stylus. This object also has several local comparanda, such as one found in E128. Other objects were uncovered

---

237 This feature is discussed more extensively in the section concerning Structure B.
238 This is a very interesting locus and it is unfortunate that more cannot be said. As stated, it has the highest concentration of pipe and tile ceramic fragments at E121. Surprisingly, in the Surface on which it lies is a narrow, shallow trench, which appears as if it could have held a pipeline at some point. This detail is worth mentioning simply because the original purpose of excavating E121 in 1995 was the search for a hydraulic infrastructural feature. Although this is hardly definitive evidence, the high concentration of pipe and tile coupled with the unique shallow trench in the Surface could indicate some previous hydraulic function. It could also indicate that the Surface was visible during Phase 1. Further excavation to trace this trench might prove helpful.
239 See Appendix A: H08.0224.01, H08.0225.01.
240 See Appendix A: H08.0183.01, H08.0183.02.
241 See Appendix A: H08.0191.01.
from the ash, such as a small sandstone pot stopper from Square 12 Locus 805 and a possible lump of slag or melted ceramic waste from Square 09 Locus 812. The stopper does have a few local comparanda, notably two uncovered in E128 during the 2008 season. Several samples of the ash were also taken for floatation analysis of the plant remains, but the results are, as of yet, unavailable.

Assessing the character of the ash layer in relation to the rest of the site is of significant importance. Several large concentrations of ash at the site have been excavated originating in different contexts and producing different finds. For instance, excavation in the fort revealed a workshop in Area H, which had a thick layer of ash and “hundreds of iron and copper artifacts.” This ash is not a particularly effective parallel for E121 with such a high concentration of metal fragments. E121’s ash certainly contained iron, but not to the same extent. The same can be said about the ash associated with the E077 bathhouse. The earliest excavations of the Project along with the most recent excavations in 2008 suggest that bathhouse ash typically has considerable amounts of hypocaust tiles and flue pipe fragments. Furthermore, excavations at E122 revealed an ash dump from the bathhouse, likely dating to a period of renovation, which contained similar high concentrations of flue pipe and hypocaust tile. This particular dump is of interest to E121 simply because it also dates to the Early Byzantine period. Nevertheless, despite the presence of some tile in Square 12’s Locus 805, it seems unlikely that the E121 ash is entirely associated with bathhouse waste, though this one locus might be. Of course, another solution might be that the E121 ash is cooking waste; the ceramics could suggest exterior

242 See Appendix A: H08.0418.01.
243 Reeves et al. (forthcoming) Fig. 14.
244 Oleson et al. 1999, 419.
245 Oleson et al. 1990, 294; Reeves et al. (forthcoming).
246 Oleson et al. 1999, 427.
burning, but one might expect to find more bone like the dump found in E128 and the late third century dump associated with the fort’s Praetorium. Although not necessarily attested locally, it has been suggested that this amount of ash could be associated with funerary pyres. Although this solution is interesting, the possibility seems unlikely since none of the ceramics were burnt both on the interior and exterior. With no good parallels, the actual character of E121’s ash is relatively vague. This nature, however, could simply indicate that the ash and its contents are a dump in the truest sense not associated with a single function, but rather a collection of everything mixed together.

The actual origin of that ash and associated materials is unclear. Most likely, the ash originated from the fort, since that is the largest and nearest structure, but where exactly in the fort is less clear. The heated room of the Praetorium (Area I) is an interesting possibility. Excavation of this area revealed very little ash, suggesting regular cleaning of the furnace must have occurred. The E121 ash could be that cleaned out ash coupled with other refuse. The phasing, however, does not seem to match as this area of the Praetorium went out of use before the second occupation of the fort in the fourth century CE. Another option could be the possible industrial section of the fort, Area N. This structure, located very near to the west gate of the fort and attached to the Latrine, did not show signs of ash collection, but did show signs of occupation during the fourth century CE, which, at least, puts it in the right phase and in close

---

247 Oleson et al. 2008, 323 - 324; Reeves et al. (forthcoming).
248 (A. Shelton, personal communication, 2009). There are certainly many other possible explanations for the ash, such as bread oven residue. Bread ovens have been excavated at Oboda and Legio in Israel, both of which had Roman garrisons. Such large ovens certainly would have produced immense amounts of ash but further analysis on the ash itself is necessary to associate it effectively with any particular function. See Goren and Fabian (2008, 347 – 350) for the Obodas bread oven and Tepper and Di Segni (2006, 45) for Legio.
249 Oleson et al. 2008, 323.
250 Oleson et al. 2008, 323.
proximity.\textsuperscript{251} Extensive renovations also seemed to be occurring in the area around Area N during the fourth century CE, which also suggests the area’s continued habitation. Admittedly, this is slim evidence. Further excavation in the fort could help reveal other possibilities along with further excavation of the ash layer itself and the surrounding areas of E121.

The most obvious and helpful thing about the ash is its contribution to the chronology of E121. The ash is very clearly under Structure B and on top of the Surface. This is helpful for assessing that Structure B is in fact later than the likely fourth century occupation of Structure A and the ash. Structure B and its associated phasing are discussed below, but it is important to note here that even if the exact character of the ash remains unclear, it does very distinctly separate Structure B from the rest of E121.

5.2.5 Conclusion: The Character of Phase 2

It is clear that Structure A went through renovations during Phase 2. It was realigned to access the Platform as a floor. The curvature of Wall 802 and the overall decreased quality of the walls suggests this. Moreover, the addition of the beaten earth floor (Square 07 Locus 09) south of Wall 04 to match the top elevation of the Platform supports this renovation. The major renovations to the fort during this period also make the renovations seem highly plausible especially since the beaten earth floor (Locus 09) dates to the same period.

The reuse of the Platform is certainly also of interest. Whatever the original purpose of the Platform was, by Phase 2 it seems to have lost that becoming, instead, a floor. This development is evident on several accounts. Firstly, the probes adjacent to the Wall 04 and the Platform date to the same period. Secondly, the extent of the beaten earth floor, Locus 09, is crucial. It is present between Walls 03, 04, the southern extension of Wall 802 and the Platform.

\textsuperscript{251} Oleson \textit{et al.} 2008, 323.
It is not present in two significant locations, immediately east of the presumed southern extension of Wall 802 and adjacent to the east edge of the Platform. This does indicate that the southern extension of Wall 802 likely did continue towards the northeast corner of the Platform. It also suggests that the floor either did not continue on the other sides of the Platform or that it was subsequently robbed out. It is speculative to consider what this means about the southern extension of Wall 802, but it does give a basic sense that Structure A probably did not continue eastward in Phase 2.

Function, of course, remains highly elusive. The construction techniques point towards Roman involvement, but are still problematic. Locally, the use of stone construction along with heavy mud packing correlates with some of the fort’s interior structures, like the Area J’s Horreum and Area I’s Praetorium, as well as the Roman reconstructions of the E125 shrine naos dating from the second to third century CE.\textsuperscript{252} Area I’s Praetorium likely serves as the best structural comparison as it has mud packed rubble walls with blocks used in the corners and doorways.\textsuperscript{253} Structure A also contrasts distinctly with the stone foundation and pisé walls of other vicus structures like E128 and other sections of E125, both of which largely went out of use during the fourth century CE. The problem with these comparisons, however, is that they date largely to the first occupation of the fort and Structure A shows clear signs of fourth century CE rebuilding through the incorporation of the Platform’s top as a floor, the curve of Wall 802 and the contrasting corner construction. Thus, while Structure A’s construction is comparable with the site’s Roman features and contrasts with other vicus buildings, comparable fourth century CE

\textsuperscript{252} Oleson et al. 2008, 314, 320 – 322, 324 – 325.
\textsuperscript{253} Oleson et al. 2008, 320.
structures have not been securely identified in the local archaeological record. There is obvious reconstruction during Phase 2 at E121, but the walls simply do not provide enough information by themselves to effectively narrow who built the structure, especially since only about half of Structure A is still present. Moreover, the ceramics, small finds and coins while interesting, only confirm the relative breadth of the material as opposed to focusing on a particular functional context beyond possible Roman involvement. The importation of ceramic material is an interesting topic worth pursing further, but as of now not much can be said.

The narrowest interpretation for Structure A is that it had some reconstruction during the second occupation of the fort, possibly for domestic reuse, while the area immediately north of Structure A was used as a dump for various refuse, likely originating in the fort. Although this does not seem like much of an assessment, it does confirm the continued development in the northern section of the *vicus* during the fourth century CE. This makes it one of the latest reconstructions during the Roman military occupation on the site and also one of the most northerly *vicus* structures.

254 As has been discussed, there is evidence for the fort’s reconstruction in the fourth century CE, but these additions were made on top of older structures and thus are not as securely datable as other less disturbed structures. Post-excavation analyses of these structures is still on going.
5.3 Structure B in Phase 3: Later Occupation of E121

Figure 5-6: Structure B through Squares 08, 09, 12 and 13

The evidence supporting the late fourth century CE – early fifth century CE date for the end of Phase 2 is for the most part straightforward and typical. What is less well understood, however, is when Phase 3 began. It is clear that Structure B, stretching through Squares 08, 09, 12 and 13, was constructed sometime shortly after the ash was deposited and Structure A went out of use (Fig. 5-6). It is highly unlikely that the two structures were ever used concurrently. It is, however, likely that Structure A and Structure B did have some relationship, likely with Structure B using the remaining walls of Structure A to form a closed ring. This possibility is touched on in this section. Similar to Structure A, datable loci were pursued for Structure B, but they produced less helpful results for narrowing a possible occupational date. Structure B’s function, however, seems largely pastoral. Structure B is very large, which is of particular interest to this interpretation. What is known about Structure B needs to be presented along with what can be done to understand it further.
5.3.1 Structure B: The Walls

Structure B was first uncovered in Square 08 while searching for a north extension of Wall 802 from Square 07. A highly deteriorated wall in the northwest quadrant of the square was uncovered and designated as Wall 806. This wall appeared about half a meter from the west baulk and extended northeast into the north baulk of the square. The southern section of Wall 806, however, is not attached to any other feature in Square 08. It seems likely that the stone material from the southern extension of Structure B was taken for reuse in a later period. Large amounts of cobbles were present on the east side of the wall suggesting that it might have been wider and taller in use, but on account of deterioration, only the lowest courses of the west face were present. While Wall 806 was two courses tall, in its extant condition it was only one course wide and constructed primarily of boulders and smaller cobbles. There were very few cut stones present. Thus, even during the earliest days of excavating the structure, it seemed clear that the stones were in reuse. As excavation moved north to chase the Structure B into Square 09 it also became clear that the interior of the structure was to the east and south, whereas the exterior was the west and north. This characteristic was made obvious by the assortment of wall tumble appearing on the southern and eastern side of the structure and the turn the structure made in Square 09.
The Square 09 portion of Structure B, delineated as Wall 805, does not truly form a corner (Fig. 5-7). It is clearly rounded, just as it is in Square 12, where it turns for a second time. The turn is interesting primarily because it contrasts so distinctly both the north corner and two southern corners of Structure A. Structure B’s corners do not bond nor do they abut. Rounded corners are not entirely unusual; some late Roman forts in the Near East have them for their exterior wall.\(^{255}\) It seems highly unlikely, however, that Roman engineers were involved in Structure B’s construction. The quality of the craftsmanship is poor and the obvious later date does not match their occupation. The stones are all irregular and fitted together with a mixture of both dry masonry and mud packing. The corners are essentially just larger stacked flat stones with cobbles forced between the cracks.

The corner does turn Wall 805 towards the southeast at 25° south of east. The wall bends slightly to about a 17° south of east as it continues through the southeast corner of Square 09 into

---

\(^{255}\) Parker (1995) has a typology of Roman forts in Jordan, several of which have rounded corners, like that at el-Lejjun.
Square 12. Considerable tumble was visible near the surface along the southern edge of Square 09 and in the north baulk of Square 08 again suggesting that the wall collapsed towards the interior. In Square 12 the extension of Wall 805 was designated as Wall 801. This section of Structure B appeared in all ways very similar to the previously uncovered sections in Squares 08 and 09. It revealed a second rounded corner turning Structure B, once again, to a southwest/northeast orientation. The entire wall formed by Wall 805 in Square 09 and Wall 801 in Square 12 is important for understanding Structure B. It is the only complete side of the structure extant and gives at least some indication about size and function. Most crucially the side is 8.46 m long from the Square 09 corner to the Square 12 corner. This length is returned to below.

Figure 5-8: Walls 801 and 802, Structure B in Square 12

Structure B turns and continues towards Square 12’s south baulk, but a distinct section of the wall missing immediately after the corner (Fig. 5-8). It seems likely that this portion was
simply robbed out like other sections. On account of the break though, the continuation of Structure B was delineated as Wall 802 in Square 12. This section runs opposite and essentially parallel to Wall 806 in Square 08. The distance between these two walls is 9.23 m. Probes immediately south of Square 12 in Square 13 revealed that Wall 802 was robbed out heavily, petering into rubble. This absence presents a problem for interpreting Structure B since it does not form a complete enclosure, missing most of its southern half. It seems reasonable, however, to assume that at one point Structure B did form a closed structure. As the walls dissipate in the southern section, Structure B may have abutted the remains of Structure A to form its south-western perimeter. This theory is hard to prove and has been suggested simply because it makes some logical sense. The reuse of existing ancient buildings at Hawara by later inhabitants is hardly unusual. Several modern examples exist locally. For instance, in the mid 20th century one of the Byzantine churches, B126, was converted into a Bedouin house. In addition to this, the bathhouse of E077 was partially cleared out in the 1960s because a resident built a stone hut attached to its eastern wall. It does not seem likely that Structure B is a modern construction, as nothing was found in the soil around it to suggest a modern date; nevertheless, standing structures were reused during the site’s history just as often as they were in modern times.

The soil layers immediately under Structure B are also very important. Unlike the Phase 1 of Structure A, which appeared to have been built on sterile soil, Structure B was constructed on layers of occupation. The stratigraphy under the walls is relatively straightforward and uniform across the structure. At the lowest level was the Surface with the ash layer immediately

256 Oleson et al. 1999, 430 – 431. On account of Alt’s 1936 records, for several years prior to its identification, the Project was aware that another church existed at the site. It was not identified because sometime after Alt’s visit, it became the residence of one of the locals.
257 Oleson et al. 1990, 294. This hut is particularly infamous because of its resident, a Moroccan man named Abdul Aziz al-‘Arabi. Supposedly, Moroccans have a reputation locally as being ‘magicians’ with
above it. Unlike some other areas, where the ash was separated from the Surface by a layer of loose soil, under Structure B the ash is directly above the Surface. Above the ash, however, is another layer of soil, which varies in consistency and depth slightly from square to square. In Square 08 and 09 for instance, under Wall 806 and Wall 805’s corner is a layer of loose light brown soil with many cobbles. As Structure B turns, however, the cobbles disappear and a layer of similarly loose, but darker soil remains under the walls, possibly stained by the ash. In Squares 08 and 09 both the cobble layer and the dark soil layer are only 0.1 – 0.2 m thick. In Square 12, however, the soil separating the bottom of Structure B and the ash layer is 0.55 m – 0.7 m thick. The discrepancy in the soil thickness between squares is the result of a variety of topographical changes between Square 09 and 12. There is a slight upward slope of Structure B from the Square 09 corner, with a bottom foundation elevation of 960.749 masl and the Square 12 corner, with a foundation elevation of 960.942 masl. This slope relatively matches the west to southwest downward slope of E121. In addition to this, the elevation of the Surface decreases considerably. In Square 09, the Surface’s elevation is 960.555 masl, whereas in Square 12 it is 960.378 masl. The exact nature of this drop is still unclear. It is not obvious whether the drop is a result of two separate surface layers or a downward slope north of Square 12 and east of Square 09. Sharp drops in the Surface, however, are not entirely unrepresented. The stratigraphy in Square 11’s north baulk for instance does indicate a sharp 0.25 m drop in the Surface, which continues after relatively flat. Further excavation, however, is still required to understand the nature of the Surface more fully.

considerable skill at finding treasure. Much of the damage caused to the bathhouse is related to this reputation and other residents believing he must have constructed his house there purposefully.
The tumble of Structure B also needs discussion. Structure B clearly collapsed towards its interior as the tumble suggests and is especially visible in the north baulk of Square 08 (Fig. 5-9). Although the tumble is wide stretching south, it seems unlikely that Structure B was very tall. Most of the tumble is composed of cobbles with occasional larger boulders and broken ashlar blocks towards its most southern edge. There, however, is not much evidence for mud packing between the stones. With these present materials and Structure B having been built on essentially loose soil, it seems unlikely that it was very tall. Moreover, it indicates that the builders were not concerned with relative structural soundness, possibly because the structure was only temporarily occupied. It seems more plausible that the present tumble was used to support a wider, but lower wall from collapsing in on itself, as eventually happened. This wider wall, although very difficult to see, is possibly hinted at by a series of linear placed stones uncovered in Square 08’s north baulk (Plate 2). This type of construction is used widely in the fields around the site to delineate farmers’ plots or animal pens.

In addition to this, the tumble in the north of Square 08 has one particularly telling characteristic. Namely, the tumble itself slopes downward suggesting it fell onto a sloped surface. This orientation is very different from the tumble found associated with Structure A,
which was all situated on a flat surface. To be more specific, the top of Wall 805’s outer face in Square 09 starts at 960.969 masl, immediately south of that in the north baulk of Square 08, at the beginning of what appeared to be the tumble it is 960.866 masl, finally further south at the end and bottom of the tumble it is 960.672 masl. Larger stones were present even towards the most southern edge of the tumble. The downward slope of the tumble could explain the absence of the Surface and the ash in the central portion of Square 08, the interior of Structure B. As was noted in section 4.2.3, the Surface in Square 08 appears to be cut forming an eastern edge (Fig. 5-6). This cut is likely manmade as all other breaks in the Surface, as seen in Square 09 for instance, are small and jagged. This edge seems to indicate that the low wall of Structure B was formed, but then the interior of the structure was actually dug out, removing the Surface and the ash in the process, to create a large pit. This would, in effect, increase the height of the walls. It would also explain why the Surface appears cut, how it manages to encircle Structure B, but not be present in the interior, and why the ash was not found in the interior despite clearly continuing underneath the walls in each square.

This completes the physical description of Structure B. Although some interpretations could certainly be expressed at this point, it is first necessary to review the finds uncovered from the area. They provide further rationale for understanding this later structure and putting it into its appropriate context.

5.3.2 Ceramics and Small Finds: Structure B in context

There are only a few loci that can be safely associated with Structure B. In total only five loci are available and none is as helpful as those from Structure A. These loci are all from Square 08. Locus 807 is a layer of loose soil and cobbles along the south baulk and the cut edge of the Surface. Locus 808 is a layer of cobbled tumble from Structure B along the north edge of Square
08 with Locus 809 being the soil immediately beneath it. Locus 811 is a similar layer of wall tumble in the north baulk of Square 08 with Locus 814 being the layer of soil immediately under it. The character of these five loci is important because they do at least offer some sense of what Structure B’s interior might have been like.

Locus 807 is probably the most complicated because it is large and irregular in shape. It was a cobbled and loose soil layer adjacent to the east face of Wall 806, but it also covered the southwestern quadrant of the square. It was the removal of Locus 807 that revealed the cut edge of the Surface. It seems likely that the cobbles were associated with Structure B as they were uncovered above 0.44 m of unstratified, loose, light brown soil. Not surprisingly, the ceramics from this level are very similar to those found at comparable levels on the opposite side of the wall: almost all primarily coarse kitchen and storage wares dating to the Late Roman or Early Byzantine periods. As excavation continued, the lowest levels of the locus produced less ceramics, but with the same overall character. The area was excavated to a sterile soil layer with cobbles and the same soil present all the way to the bottom.

Locus 808 and Locus 809 were located in the probe along the north baulk of Square 08 through Structure B’s wall tumble. One of the biggest problems with Locus 807 was that the ceramics collected from the tumble as opposed to those collected beneath it were not properly separated. This was why Locus 808 and Locus 809 with Locus 811 and Locus 814 were excavated in order to try to discern any distinct ceramic shift between tumble and the soil immediately beneath it. Locus 808 through Locus 809, however, showed no distinct progression. Rather, much like Locus 807, the ceramics continued to remain distinctly coarse storage and kitchen wares ranging in date from the Late Roman to Early Byzantine periods. Moreover, the soil of Locus 809 was also unstratified, lacking the definitive ash layer and Surface present on the outside of the structure. The only indicators of possible stratigraphy were patches of diffused
darkened soil in the generally orange Locus 809. These patches could indicate that the ash had been present under the wall before it collapsed, but not necessarily. The details of this possibility are discussed below.

Locus 811 and Locus 814 are part of the same probe through the tumble, but in the north baulk of Square 08. Not surprisingly, the character of the ceramics does not differ considerably. Both loci produced primarily coarse kitchen and storage wares. Unfortunately, very few of them could be dated. This portion of the probe was not dug to sterile soil, but it seems safe to say very little would have been different from Locus 808 and Locus 809.

The most striking thing about the ceramics is the lack of change through the soil. Over half of a meter in depth of soil was removed from the probe before the excavators reached a sterile soil layer. This deep homogeneous layer, both in regards to its ceramics and loose light sandy brown soil, likely signifies some disturbance to the original soil strata. This type of disturbance would support the idea of a pit dug from the interior of the structure. These ideas need to be explained further. Moreover, the matter of when the structure is from, what it functioned as and whether anything else can be learned from it needs discussion.

5.3.3 Structure B in the Regional Context: Date, Function and Collapse

Structure B does have some local comparanda, but like the Platform, is also peculiar enough that it could be interpreted in a variety of ways. The size and character of the construction, contrasting inner and outer stratigraphy and uniform ceramics do offer a sense of possible function and date. Regional comparanda fortunately help considerably in identification, but the excavation itself can also infer several features of the structure.

First, it seems that Structure B likely did not have a roof. As noted, the structure is a little over 9 m wide from Wall 806 in Square 08 to Wall 802 in Square 12. This distance would simply
be too far to span without some interior support, for which there was no evidence. Moreover, the walls clearly were not very tall suggesting instead that the Structure was open air. It is possible, on the other hand, that Structure B had a non-permanent roof like the tent covers used by local Bedouins widely in antiquity and the modern era. If this structure were antique, one would have expected to find more ceramic remains especially along surface probes, like Locus 807 in Square 12, which probed the surface interior of Wall 802. In contrast to Structure B, Field C124, the Nabataean period (first – second century CE) campground along the southern edge of the urban area of Hawara was full of complete restorable ceramics. Although some excavation of both Roman period tent camps and modern Bedouin tent camps have shown that very little typically remains structurally, sometimes larger remains do exist, such as those at the Masada siege works in Israel. Later military occupation for Structure B, however, seem unlikely without further evidence about the character of the military at the site after the abandonment of the fort. Another possibility is that Structure B is relatively modern, since there tends to be less cultural remains in modern contexts.

The presence of one thick, homogeneous, soil stratum in the centre of Structure B in addition to the uniform ceramic content, also distinctly contrasts the outer areas adjacent to Structure B, which revealed distinct thinner layers of soil, ash and the Surface uniformly. As noted above this likely indicates some disturbance on the interior of Structure B. The most plausible solution is that the interior area of Structure B was dug out, removing the ash and the Surface, which would have been present. This was likely an attempt to make the walls effectively taller than they actually were, which was very short. This hypothesis is supported by the

obviously cut edge of the Surface in Square 08 as well as the sloping wall tumble found in the northern probe of Square 08. To be more specific, the thick layer of loose, light brown soil is likely windblown soil that filled in the area shortly after it was abandoned, and then was compressed over time. This event would have happened very quickly as a similar soil buried the entire 1995 excavation area in a mere 13 years leaving little stratigraphy (Fig. 5-10). Additionally, the cut edge of the Surface and the sloped tumble can explain the uniform ceramics. As was noted, Structure B would have been a low wall built essentially on loose soil. As a low wall, it seems highly unlikely that Structure B collapsed from the top down. Rather it seems more plausible that the loose soil below it gave way sometime after the pit was dug causing the wall to collapse from the bottom. This situation would explain how the fourth century CE loose soil, ceramics and tumble of Structure B were transferred to the lowest sterile soil layers. Such a situation could also explain why larger stones were found even at the southern most edge of the tumble and the lowest elevation. It might offer a solution as to why some of the soil under the tumble did have patches of diffused darkening, likely being stained by whatever ash was under Structure B. While this is speculative, it is a plausible solution to rather homogenous stratigraphy.
These characteristics are all important for discerning function. There are plenty of low-walled, un-roofed structures at Hawara. It seems likely, however, that Structure B served as an animal pen for local herders. There are several of these type of structures at Hawara, including one particularly large one part way up one of the western hills flanking the site known as Jebel Qalkha. As Rosen points out in his discussion of Byzantine nomadism in the Negev, most pens average about 15 m x 10 m, which is about Structure B’s size, and are poorly constructed from whatever is available.\textsuperscript{260} Moreover, animal pens do not need to be associated with camps, so the lack of other obvious structures is not uncommon and are not necessarily known for extensive human cultural remains.\textsuperscript{261} Survey in the Negev has also made it clear that animal pen walls were

\begin{flushright}
\footnotesize
\textsuperscript{260} Rosen 1987, 36. \\
\textsuperscript{261} Rosen 1987, 36.
\end{flushright}
wide, but not particularly tall, only about 1 m each. Similarly, survey of Bedouin settlements in Petra show animal pens using existing natural and man made features to reduce the amount of walls needed, which may support the hypothesis that Structure B used Structure A’s extant walls.

The core problem with animal pen identification, however, is that their design has not particularly changed since they were first used in prehistory. Survey of Bronze Age sites in the Near East has highlighted that pens from that period essentially look identical to their Byzantine period counterparts. It seems likely that Structure B was constructed sometime shortly after Structure A went out of use, likely before its north corner collapsed to make use of any standing walls, but there is little evidence to prove it. As noted, the wall tumble in Structure A was far less concentrated in the north section of its interior, suggesting that that section of the structure actually continued to stand until it was likely dismantled. Alternatively, it could have collapsed and the stones could have been removed. The collection of ceramics underneath Structure B confirms that it was built after the fourth – fifth century CE, but it is hard to pin down exactly when. Unfortunately there are few ways to prove it more definitively. These theories surrounding Structure B could be strengthened with some further excavation, the details of which are discussed in Chapter 6.

5.4 Phase 2 and 3: Conclusions about Later Reuse and the End of Occupation

Phase 2 and 3 are important because they show the continued use of E121 until its eventual abandonment during the Byzantine period. While neither phase offers the functional interpretation that Phase 1 and the Platform provided, the reuse of Structure A, the ash deposit,
followed by the construction of Structure B shows the continued desirability of the area during and after the second occupation of the fort. Structure A particularly could show the Romans’ continued interest in the structure and area. Most importantly, this occupation clearly demonstrates development in the *vicus* area through the fourth century CE, which contrasts the reuse by squatters of E125 during that period, the abandonment of E122 and the dump of E128.\(^{265}\) This suggestion is of considerable interest for defining the relationship between the Roman garrison and the civilian settlement. Even if E121 specifically cannot help progress our understanding of the nature of that relationship, it certainly has identified an area of the site with further research opportunities on the topic. In particular, the area’s heavy occupation during the second occupation of the fort is something unique and not yet fully understood.

Structure B, unlike Structure A, is very likely not a Roman construction. It has the signs of hasty, haphazard construction, uncharacteristic of the Romans and it is clearly built above the Roman occupation layer. While the remains are heavily deteriorated, it seems highly likely that Structure B abutted Structure A to form a closed ring. This assertion is not provable, but it is certainly not unreasonable. As the only Phase 3 feature of E121, Structure B is a bit harder to put into a proper historical context. Phase 3 could distinctly benefit from further surface excavation to reveal any other structures near the surface that might be related to it. Such excavation could help support the idea of a partially dug out animal pit. As of now, though, it seems evident that whatever E121 functioned as during Phase 1 or Phase 2, it became far more related during the following occupation to pastoral husbandry. This shift is not entirely surprising since during the Byzantine and later periods, urban life moved away from the fort and its periphery, southeast

\(^{264}\) See Haiman (1996) for his survey of Bronze Age sites in the Negev and Sinai deserts.  
towards the hills where the churches were eventually constructed. The shift, of course, pushed E121 even further away from any likely urban function.

In sum, Phase 2 shows a continued occupation of E121, likely with a change of function from Phase 1, somehow connected to the deposit of the ash. Phase 3 shows how E121 was reused after the abandonment of the Roman fort. This distinct change in function should not be surprising, just as the change in function from Phase 1 to Phase 2 should not be particularly surprising. Research regarding these phases is far from complete and more fieldwork is necessary. This suggestion is presented in the final chapter more fully along with some concluding thoughts on how these three phases help answer our primary research questions.
Chapter 6

Conclusions and Proposals for Future Excavation

I proposed at the beginning of this thesis to present the previously unpublished material concerning E121 from both seasons and reinterpret the results in light of the most recent findings. This has been done. Additionally, the local and regional context of E121 has been accounted for in order to rationalize and assess these interpretations. Although each object as not been individually discussed, the appendix, in particular, contains data hitherto unavailable to other researchers.

The 1995 and 2008 excavations of E121 have revealed significant information regarding the development of Hawara’s vicus. Hitherto, the northern periphery of the vicus had been less well represented in the archaeological reports; the fort and hydraulic survey had simply dominated the Project’s time and energy in this sector. Now, however, the excavations in E121 have made it clear that urban development was occurring not just outside the southwest corner of the fort, represented by E077, E122, E125 and E128. Rather, E121 shows that such development was occurring further north, certainly to a point north of the Nabataean reservoir and west of the fort’s west gate. Beyond demonstrating the greater expanse of the development, excavation of E121 contributes several points of key interest to the current research goals of the Project. Moreover, it proposes new questions requiring further clarification via survey, excavation and research. This concluding chapter defines those points of interest and new questions along with specific future excavation goals to strengthen the current results.

6.1 E121: Contributions to Research of Ancient Hawara

With regard to the greater question of the site phasing, E121 contributes a few points of interest. Depending on which interpretations are favored, these points could help develop a better
sense of the civilian and military interactions as well. Most notably, the reoccupation and reconstruction of Structure A during Phase 2 confirms some growth and occupation outside the fort during the fourth century CE. It also provides an example of fourth century CE architecture, an architectural phase currently unrepresented in the site’s archaeological record.\textsuperscript{266} This fills a previous gap in our understanding of the \textit{vicus’} occupational history. E125, the largest and most extensively excavated \textit{vicus} structure, was entirely abandoned by the later third to early fourth century CE with only sporadic reuse by squatters afterwards.\textsuperscript{267} This abandonment was also mirrored at other \textit{vicus} structures, like E122 for instance.\textsuperscript{268} The abandonment is not surprising, and is likely a consequence of a widespread military reorganization of \textit{Province Arabia} at the end of the third century CE, which affected Hawara’s fort.\textsuperscript{269} E121 is unique in the \textit{vicus} as it shows signs of rebuilding and reoccupation in the fourth century CE, which is concurrent with the reoccupation of the Roman fort. It is possible that area’s reconstruction is a sign that whatever diminished community remained in the \textit{vicus} during the fourth century CE was more concentrated opposite the western gate of the fort than in the southwest corner. The large mound immediately east-northeast of E121 could be indicative of more structures locally. Moreover, the area surrounding E121, especially nearing the Nabataean reservoir, is heavily littered with large stones and many ashlar blocks.

Further survey and excavation in this area, along with the area separating E121 and E077, could be beneficial for identifying the extent of the settlement during the fourth century CE. Heavy reuse of stone material in subsequent periods, however, makes it likely that many of these

\begin{footnotesize}
\begin{itemize}
\item[266] There are several Byzantine period churches with uncertain construction dates. With E121 as an example of fourth century CE architecture, it might be possible to discern whether or not any of these churches dates to this Early Byzantine period.
\item[269] Parker 2006b, 538 – 552.
\end{itemize}
\end{footnotesize}
structures have suffered considerable damage since Antiquity. The cultivation of the adjacent agricultural plots also likely has caused significant damage to the area. Nevertheless, the possibility of further evidence for fourth century CE occupation, whether military or civilian, could be very helpful for understanding the development of the site. The civilian/military relationship in the fourth century CE is not well understood, and further research could prove very beneficial to the Project and the archaeological community as a whole.

In addition to the fourth century CE occupation, there is obvious Roman involvement in Phase 1 during the late second to third century CE. This period is better represented locally, but the addition of E121 to that body of work is helpful on several accounts. The use of the Roman foot in the Platform is likely indicative of Roman construction. If the Platform functioned in a military capacity as a tribunal or even an associated altar, it distinctly adds several pieces of information. Firstly, it could support the hypothesized presence of the campus and add to our understanding of what occurred in this sector of the site.\textsuperscript{270} Secondly, if it is a military structure, it would indicate the expansion of Roman constructions outside the fort comparable with the E077 bathhouse and the Roman altar in the E125 shrine. If the Platform is not of some military function and instead served a civic purpose, as suggested in Chapter 4, it furthers Reeves’ current theories about the Roman/civilian relationship in association with sacred orientation. If the orientation of the Platform has sacred intentions and the Platform itself is a Roman construction, the results concur with Reeves’ theory of civic concordia as suggested by the E125 shrine.\textsuperscript{271} This evidence could be particularly helpful especially in light of the newly documented Hegra inscription distinctly laying out the cooperation of the Romans and civilians in a former

\textsuperscript{270} For the campus hypothesis, see: Reeves et al. (forthcoming).
\textsuperscript{271} Reeves (in preparation).
Nabataean town within *Provincia Arabia*.\(^{272}\) Moreover, the information gathered from Hawara could support the suggested Nabataean cultural revival of the late second to third century CE.

The second major point of interest, which excavations at E121 have produced, regards possible site orientation. As noted in Chapters 4 and 5, one of the most interesting features of the Platform and the north corner of Structure A is that they line up distinctly with the orientation of the E077 bathhouse and Nabataean structures. This association is a very promising first step towards understanding whether parts of the *vicus* were constructed on a Nabataean orientation. The meaning and extent of this observation, however, are preliminary. Further research into E077 and the Nabataean settlement is necessary to reveal whether or not the orientation is significant to the Nabataean period. Moreover, the excavation of other structures between E121 and E077 could highlight whether the orientation transferred to parts of the Roman period *vicus*. If proven correct, the data could offer some very interesting research opportunities and contribute significantly to the Project’s current research goals. On a regional scale, this observation would conform to other urban development research being conducted on larger cities, like Bostra and Gerasa, which show that Roman orientations are heavily dependent upon Hellenistic and Nabataean antecedents.\(^{273}\) More research regarding this topic could be very beneficial to understanding the civilian/military or Nabataean/Roman dynamic of the settlement and relating it to other urban centers.

### 6.2 E121: Future Excavation Goals

These contributions to the research of ancient Hawara are, of course, not the only deductions worth mentioning. Naturally, the phasing of E121 itself along with the full excavation

---

\(^{272}\) Al-Talhi and Al-Daire 2005, 208.

of Structure A, Structure B and the Platform are all locally significant. Without repeating extensively what has been discussed in the previous chapters, the phasing and full understanding of the structures of E121 are still preliminary. Several measures can and will be taken in the coming excavation seasons to strengthen and confirm what has been suggested through this thesis. Although Phase 2 is clear and supported with ceramic, numismatic and stratigraphic evidence, Phase 1 and Phase 3 still have many unanswered questions. That being said, the 1995 and 2008 excavation seasons have confirmed several features about E121; for instance, it is clear that Phase 3 dates to after the fourth century CE; additionally, it seems likely that the Platform dates to the site’s Roman phase. These assertions are helpful, but would benefit from further support. E121 does not need major excavation to strengthen the current results. What it does need is focused excavation with clear goals. Although other structures could exist to the east-northeast, the current structures of E121 first need refinement. Each major feature of E121 is discussed individually below.

6.2.1 The Platform

The biggest issue with the Platform is that its phasing is heavily dependent upon local trends and comparative analysis. While the analysis is crucial for understanding function, it is hindered without ceramic evidence confirming its construction date. Furthermore, the 1995 foundation probes only confirmed that the fill adjacent to the east of the Platform dated to Phase 2. This date is contemporary with the beaten earth floor (Locus 09) adjacent to the north of the Platform. This assessment highlighted that the area adjacent to the Platform had been disturbed to its foundation level sometime during Phase 2. There is one course of action to solve this problem: a probe through the Platform to sterile soil. The best place for such a probe is likely the north edge of the Platform since that is the best-preserved segment. It would be very helpful to first take up a segment of the second course, the flat upper surface, to see if anything is between
the two layers and examine the rubble and mortar core from the inside. This could be helpful for confirming the construction methods and dating if there are embedded ceramics. Undatable sherds were uncovered in the mortar still adhering to the top of the Platform (Square 02, Locus 802). Their presence is a good indication that more sherds would be found in the mortared cobble core itself. From there, a removal of the core and the layer of soil it rests upon should provide enough evidence to date the structure more conclusively without needing to rely on adjacent sherds.

6.2.2 Structure A

Structure A’s collapse date in the late fourth to early fifth century is evident from the sherds uncovered in and beneath the tumble loci (Loci 810 and 812). Whether Structure A had two distinct occupational phases, as suggested here, is still unclear. Phase 2 is evident from the foundation probes conducted in 1995 adjacent to Wall 04 (Locus 12) through the beaten earth floor (Locus 09). Phase 1, however, is not clear since the foundation probe conducted adjacent to the north corner of Structure A (Square 08, Locus 815) did not produce any datable ceramics. Two specific probes could help solidify Structure A’s phasing. One option would be to dismantle parts of the structure to see if conclusive sherds could be acquired from directly beneath the walls. The most feasible option would be to take apart a section of Wall 820 since it is believed to be from Phase 1. Alternatively, a foundation probe done adjacent on the interior of Structure A’s bonded northern corner could produce the same results, but ultimately would be less conclusive. Since the area beneath the wall has not been disturbed, it would probably be the better option. Ceramics were found in the adjacent foundation probe, so it is likely that ceramics exist beneath the wall that could be datable.
6.2.3 The Surface and the Ash

Certain features about the ash and the Surface are not completely understood. Exposure of the full extent of the Surface is not an obtainable excavation goal. Its presence throughout many parts of the site simply makes it unreasonable to pursue on a large scale. On the other hand, certain features about the Surface, notably the distinct drop that occurs between Square 09 and Square 12 should be considered further. The best way to understand the drop in the Surface would be to excavate the square immediately north of Square 12 and east of Square 09. At some point in this area the Surface must drop to the elevation it is in Square 12. If that could be determined, it might be possible to define whether there are multiple levels of the Surface around E121 and whether they all date to the same period. Further probes through the Surface, as was done in Square 11, could produce more information concerning their phasing, but since those large probes produced little, it might be wiser to rely on relative stratigraphic dating. The campus interpretation is something worth remembering for future excavation seasons. Excavations of the area east-northeast of E121 might be helpful if other structures could be uncovered that suggest a campus, like an additional platform or temple.

The ash is more enigmatic. Acquiring the full extent of the ash is likely an obtainable goal and could be sought concurrently with the investigation into the Surface, though knowing its full extent might not be entirely useful. It is evident that it is a large dump from a mixture of places, all likely originating from the fort. Excavation, however, of other possible structures close to E121 might simply be a more productive way of pursuing the ash and understanding it further. The mound immediately east of E121 might be a good starting point, which could show not only the ash, but additional structures. Additionally, more samples of the ash could be taken for floatation and other analysis to see whether it is uniform in character.
6.2.4 Structure B

The conclusions concerning Structure B presented in Chapter 5 are plausible and very little could be uncovered to support them further. On the other hand, some of the aspects of those conclusions could be strengthened with a few pieces of excavation. The assertion that Structure B had a dug-out interior, resulting from having the Surface and the ash layer removed, seems likely, but further details concerning it would make the solution more convincing. Several specific probes could help with this matter.

A probe in the central interior of Structure B, away from the wall tumble could help define whether the soil stratigraphy is uniform and the result of windblown fill. Although this is present partially on the east edge of Locus 807 in Square 08, another probe could confirm it. Moreover, the presence or absence of any cultural material could help refine the animal-pen assessment.

The wall tumble could also be probed further. A probe defining the wall tumble in Square 12 could prove beneficial for confirming a slope. The south, interior side of Wall 801 in Square 12 was not excavated making it the ideal candidate for this probe and for comparison with the Square 08 tumble. Beyond these minor additions, little more can be derived from Structure B.

6.3 Concluding Thoughts

Finally, what has not been mentioned is how E121 can contribute more broadly to the knowledge of Roman Jordan. There is a patchwork of information about Jordan in Antiquity, particularly during the Roman period. Research on civilian settlements in the hinterlands of larger cities is not well understood.\textsuperscript{274} Little is known about the character of these settlements and

much more research is necessary, some of which is happening at Hawara. The goals of the Project reflect this current need and E121 contributes in a few ways.

Without further excavation, it is unlikely that E121 will be able to define civilian and military interactions, like the E125 shrine has done. On the other hand, depending on whether one favors a military or civilian interpretation, E121 could distinctly alter how the civilian and military relationship is understood. Furthermore, the current fourth century CE evidence is very interesting and should not be left without a follow-up. If evidence can be unearthed to link E121 and its surrounding areas more conclusively to either the Roman garrison or the civilian community during the fourth century CE, it could become crucial to unraveling this historical phase locally and regionally. Such evidence would be unique locally and very important for research into this transitional period, particularly in southern Jordan. If E121 is able to galvanize further excavation and research specifically into this period, it will have contributed greatly to the Project and regional research.

The 1995 and 2008 seasons have truly only produced preliminary results. These results, however, are very promising. Everything that has been presented in this thesis could be improved upon and strengthened with further fieldwork. Hopefully, now that a preliminary analysis of the field has been done, a clear goal can now be set with more finite objectives to pursue. Most importantly, these area goals are concurrent with the overall direction of the Project. In the coming years, further excavation of E121 and its surrounding area will be able to provide ample field school and research opportunities for new students. In addition, it will help maintain the historical, archaeological and cultural relevance of the Humayma Excavation Project to Jordan and the archaeological community.
Bibliography


146


Reeves, M.B. in preparation. “Identity, dominance, and harmony: the values of a Nabataean and Roman town as reflected in its community shrine.”


Appendix A

2008 Registered Finds

H08.0130.01. Iron tool.

Complete iron object with two rounded ends. It bulges in the middle and tapers towards the ends. Measurements after cleaning: MPL 0.067 m; thick half D 0.012 m; thin half D 0.006 m. 10 g.

Conserved. E121.08.802. 18/05/2008.

cf. Manning 1985, 40, Pl. 16, Fig. 9, Catalogue no. E8: ‘Awl Type 3b’: Leatherworker’s Awl lacking a tang so probably meant to be held in the hand, edges rounded, square cross-section; mid-1st century; or perhaps pp. 41, Pl. 16, Catalogue no. E29-E30: “Leatherworker’s Punch”.

275 These objects were originally analyzed by Reeves and the author during the 2008 season, further analyzed by Reeves and edited by the author for this thesis.
H08.0183.01. Iron arrowhead
Iron arrowhead, possibly four-sided. Almost completely oxidized. Measurements after cleaning:
L 0.037 m; tang L 0.009 m; tang D 0.004-0.001 m (at tip); head length 0.028 m; head D tapers 0.012-0.004 m; 4 g. Conserved. E121.09.803. 24/05/2008.

H08.0183.02. Iron ring.
Small iron ring with 5 flat faces. Measurements after cleaning: 0.001 m Th; ring D 0.007 m; hole D 0.004 m; external L of each flat face 0.005; < 2 g. Found in two pieces; glued by conservator. Conserved. E121.09.803. 24/05/2008.

cf. Manning 1985, 140, Plate 65, Catalogue nos. R18-53: ‘Rings’; Manning notes that these rings are very common and that it is difficult to determine their function as they were used for so many different purposes. Moreover, rings with different physical differences like diameter could be used for the same purpose.
**H08.0191.01. Iron tool.**

Complete iron artifact consisting of a narrow shaft with a sloping flat tapered head on one end and a pointed head on the other end. Measurements after cleaning: L 0.073 m; shaft D 0.004-0.005 m; flat head W 0.006 m; flat head Th 0.0015 m; pointed head D 0.002 m; 2 g. Found in three pieces. Conserved. E121.09.803. 22/05/2008.

Similar to H08.0220.01.

cf. Manning 1985, 85-87, Fig. 24, & Plate 35, Catalogue nos. esp. R13-14: ‘Stylus. Type 1’: “…slender, tapering to a point at one end and flattened into a small eraser (which may or may not have shoulders) at the other.” All examples in Manning’s catalogue are larger, but the smallest has a length of 0.078 m.
H08.0224.01. Iron tack.
Tack with bulbous head; shaft bent at 45° angle. Measurements after cleaning: L (bent) 0.014 m; projected length if not bent 0.015 m; shaft L 0.009 m; shaft D tapers from 0.004-0.001 m (at tip); head D 0.010-0.014 m; head Th 0.006 m; 2 g. Conserved. E121.09.808. 27/05/2008.

H08.0225.01. Iron tack.
Tack with flat bulbous head. Measurements after cleaning: L 0.015-0.016 m; shaft L 0.008 m; shaft D c. 0.003 m; head L 0.006-0.008 m; head D 0.007-0.009 m; < 2 g. Conserved.
E121.08.807. 27/05/2008.
**H08.0226.01. Bone bead.**

Square bone bead perforated though its length. The front and back is decorated with four straight grooves (0.001 m W) forming a frame in which two linear designs (c. 0.003 H x 0.002 m W) have been etched. Conservator notes traces of green in grooves which she suggests are possibly staining from a copper alloy object which had once been near the bone bead (in use or in the ground). Measurements after cleaning: L 0.010 m; W 0.010 m; Th 0.006 m; D (hole) 0.003 m; 2 g. Conserved. E121.08.807. 29/05/2008.
H08.0308.01. Sandstone slab.

Flat rectangular sandstone slab with rounded edges. Purplish red in colour. 0.165 m L; 0.102 m W; Th 0.023 m; 974 g. Object fits in one hand and seems ideal for a painted inscription, but no such inscription was visible in the portions which came clean. E121.11.801 02/06/2008
**H08.0418.01 Sandstone stopper.**

A sandstone artifact with one flattish face and one curved face. In profile, the object forms two halves: a curved top and a cylindrical plug. Plug D 0.043 m; plug H 0.010-0.018 m; object Th 0.025-0.029 m; 70 g. Conserved. E121.12.805. 11/06/2008.
H08.0185.01 - E121.10.801
Copper alloy coin, not perfectly circular. It is almost completely illegible after cleaning. The very worn crescent on one face could be two crossed cornucopias, which are common to Nabataean coins. The size and weight, however, are similar to the size and weight of many Byzantine coins found in adjacent square. D 0.010-0.011 m; Th 0.001 m. <2 g. Conserved. 24/05/2008.